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ABSTRACT

The Stanford residence system is one of the most varied, programmatically and physically, of any university in the country. In 1973-74, there were 64 distinct residences to which undergraduates were assigned. The scope of this study is whether or not Stanford University is denying many undergraduate students participation in its residence programs. This document is an attempt to present the reports and data about the student housing situation in coherent language. It should also serve as a basis for the decision on the construction of new residences. Contained in this document are sections covering a historical perspective, recommendations, estimates of needed new housing spaces, quality of new housing, timetables, paying for new housing, and an annotated bibliography on undergraduate residential housing. Appendixes include demand calculations, factors outside Stanford, reports of overbuilding at other institutions, and a description of the draw process. Statistical tables accompany the text. (Author/PG)

UNDERGRADUATE STUDENT HOUSING NEEDS AT STANFORD, 1974-1984

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PREFACE*

Among the distinguishing characteristics of Stanford, perhaps none is taken more for granted than that of its being a residential University.

This is not to say that either the specifically residential nature of the University or the residences themselves have gone unexplored or unremarked upon. On the contrary, at least some aspects of both appear to have been the subject of almost constant study over the years. Two reports, the Study of Education at Stanford (SES) report on "University Residences and Campus Life" (1968), and more recently, "Stanford Undergraduate Education in the Seventies: A Call for Educating the Whole Person" (1974), a paper presented by James L. Gibbs, Jr., Dean of Undergraduate Studies, explore the educational benefits to be derived from a university's being residential in nature and both reports strongly affirm the desirability, even the necessity, of treating those benefits as goals, the achievement of which should be given a high priority by Stanford.

But our awareness of the particular values of a residential education notwithstanding, we accord too little recognition to the positive influence which our residential character exerts upon those other traits of Stanford by which it is identified as an outstanding university.

On those increasingly frequent occasions when we are asked to compare Stanford with other institutions of higher education (often less costly ones),

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*To supplement the scope of the study below, Fred A. Hargadon, Dean of Admissions, James L. Gibbs, Jr., Dean of Undergraduate Studies, and Larry N. Horton, Associate Dean of Student Affairs/Residential Education, met to prepare a statement on the current significance of Stanford undergraduate residences. The resulting statement by Fred Hargadon is an appropriate preface to the housing study.

we are inclined (not inappropriately) to cite the differences between colleges and universities, to refer to the exceptional quality of our faculty and students alike, to point to our limited enrollment policy, and to argue the case for the maintenance, alongside the public sector, of a healthy and robust private sector. That our ability to distinguish ourselves thus is not unconnected with, indeed, may be critically related to, our being a residential university ought to be more consciously acknowledged. It is not coincidental that the most prestigious universities with outstanding undergraduate programs, as well as the most outstanding of the colleges in this country, are ones which are primarily residential in nature.

What are the benefits to be derived from a residential university and how broadly are they perceived? The role of the residence system in the enhancement of the undergraduate educational program at Stanford is cogently presented in both of the reports mentioned above. Suffice it here to suggest the essential themes of these two documents by briefly quoting from each.

> The University cannot and should not avoid its necessary involvement in the problems and conflicts of society; to do so would further ignorance, not education. But relative solitude may, indeed, contribute to the sense of community among the University's faculty and students, the sense that we are all in the same boat intellectually, that we are engaged in a common endeavor to learn and understand. Stanford, because of its solitude, has a unique opportunity to create an academic community in which buildings, service facilities, and cultural programs contribute to the education of those who use them. (SES, 1968).

Solitude without withdrawal, a sense of community, engagement in a common endeavor -- such enhancing effects are possible in a residential setting, almost impossible in those schools which are not primarily residential. Not only does being residential enable the University to provide its students with a broader and fuller context within which to place their education, but it also, as Dean Gibbs points out, allows the opportunity for educating "the whole person." And it does this in a variety of ways.

> Understanding one's own person and character and how it relates to one's intellectual identity can occur in an especially meaningful way on a residential campus like Stanford's. Here, ideally at least, there are more opportunities for faculty, students and staff to share the intellectual and personal aspects of their lives in ways that help the student to become educated as a whole person. (Gibbs, 1974).

One obvious way in which residences contribute to a student's education is through the provision in the residences of formal academic instruction and intellectually stimulating programs. Freshman seminars, undergraduate specials, and even some departmental courses are taught in the residences, sometimes by faculty residents. The flow of faculty guests at meals and at special programs in the residences also helps integrate the academic life of the University into the living groups.

Viewing the personal development of students as the "mortar" of their undergraduate education, Dean Gibbs not only emphasizes the role which residences can play in an undergraduate's education, he points to those experiences within a student's residence which provide him or her with an opportunity to develop a tolerance for ambiguity,

autonomy and independence, and a capacity for empathy, friendship and intimacy.

> Obviously, participation in "student life" -- for example, through involvement in student organizations or through helping in governance of a residence -- fosters autonomy from adults by involving students in running their own affairs. But such extracurricular involvements also develop the sense of interdependence by providing what Halfman refers to as experience in the collaborative mode as well as experience in the competitive mode.
>
> . . . . .
>
> At Stanford the residence system is perhaps the most important setting for the development of the capacity for friendship and intimacy.
>
> . . . . .
>
> It is very apparent that participation in extra-curricular activities and living in a dormitory with reasonable heterogeneity among the co-residents exposes a student to interaction with peers who differ from him or her in various ways. Not only does this foster a capacity for empathy as noted earlier, but it provides first-hand knowledge of human diversity against which one's own uniqueness can be judged.

The effectiveness with which students will come to use the more formal aspects (the "bricks") of their education may well depend upon the extent to which they have also developed these other of those aspects of their personality which are interrelated with their more formal acquisition of knowledge, i.e., the extent to which their "whole person" has been educated. And, as is made clear in Dean Gibbs' report, our ability to provide our students with the "mortar" as well as the "bricks" is a function of our residential nature.

There is considerable evidence to suggest that those outside the University (especially parents of presently enrolled students and potential students and their parents) value highly precisely that potential of a Stanford education encompassed by the goals set forth in both the SES and the Gibbs reports. Nowhere does this come through more clearly than in the letters from parents of students who find themselves forced to live off campus after their freshman year. A quote from one of those letters serves to illustrate not only the perceived attractiveness of the residential nature of Stanford but also the perceived unattractiveness of a non-residential Stanford.

> In my opinion, the most significant part of a college experience at a great university like Stanford is the association with the students outside of the classroom and particularly in the dormitories. I know this has been the case with my daughter because of her associations as a freshman in Branner and as a sophomore in her present dormitory. I can say without any qualification that I would not consider sending a daughter to Stanford had I known that she would be relegated to living off campus.....I have another daughter who will be entering Stanford this fall and although I am sure she will have dormitory accommodations at least her freshman year, had I any expectation that she might not be able to live on campus during her entire four-year period, I would have given serious consideration to having her attend some other university.

It is not that respondents such as the one quoted above have any quarrel with Stanford's academic program. Indeed, they go out of their way to praise it. But it is also clear that they (and their children - our students) also value highly the specifically residential nature

of Stanford, and that our specifically residential nature may have played no insignificant role in determining where it was the student enrolled in college.

It is clear that were Stanford not primarily a residential university, many students who have attended the University or who are presently enrolled, would not have chosen to attend here. It is also clear that once enrolling at Stanford, the inability of the University to guarantee on-campus housing after the freshman year results (annually) in the dilution of both the enthusiasm and respect which such students bring initially to their Stanford educational experience. The continuing problem of being unable to provide sufficient on-campus housing at Stanford cannot help but adversely affect our ability to attract and to enroll, in competition with such other universities as Harvard, Yale, and Princeton (all of which provide on-campus housing, and at that, in a more continuous fashion than can we, for all four years), a significant proportion of the most able high school graduates each year. It is simply the case that a university with well-known insufficient residence capacity may not for long be able to attract a national undergraduate student body of exceptional quality.

Nor is it likely that if the pall which comes over the campus at the time of the housing draw each year continues unabated the community spirit and the enthusiastic loyalty of future Stanford alumni, both presently supportive of the goals of the University, will remain unaffected.

Both from a practical viewpoint and from the viewpoint of our educational goals, both from within the University and outside it, some relief in the on-campus residence capacity in the immediate future is imperative.

INTRODUCTION:

SCOPE OF THE STUDY

Each year in recent memory the campus has endured seasonal incantations about what some commentators have called a "student housing crisis." Other observers refer onomatopoetically to the "housing crunch." Whatever the phraseology, the gist of the assertions is that Stanford does not have enough housing for its students and is therefore denying many of its students participation in Stanford's residence program. The general feeling is that things are getting worse, not better, and that the promise of a residential University is unfulfilled. Many students face a Spring Quarter of anxiety and worry over the prospect of being denied on-campus residence for the coming year. Opinions and anecdotes, often traded with authority, all seem to carry the same theme: students are being victimized by a housing shortage.

What has been sorely lacking is a comprehensive and sophisticated analysis of the on-campus housing situation--an analysis based on data and judgment, not on opinion and wish. This staff study is a response to that need. We have sought to present to faculty, students, and appropriate University staff a framework in which the documents and the data about the student housing situation might be coherently understood. We have also tried to provide the basis for a decision on the construction of new residences.

The problem, we learned when we began last Spring, was more complex than we had anticipated. Our first task was to define the scope of our study. Initially we hoped to include all student housing in our study, but it soon became apparent that our study should be properly limited to the housing needs of single undergraduates. The two main reasons persuading us to limit our study were (1) our belief that the supply and demand for housing units currently assigned to families and to single graduate students indicate that these units should continue to be used for those categories,

and (2) our judgment, supported by undergraduate demand data, that the family and apartment units are not generally desirable for single undergraduate residency.

Our decision to limit our study does not indicate our satisfaction with the current graduate and family student housing program; rather we simply chose to examine first what we perceived as the most pressing need, that is, housing for undergraduates. It may be that a separate study of graduate and family housing should be undertaken, and we intend in a separate document, to be prepared as soon as possible, to define the parameters of such a study. We do not believe, however, that implementation of the recommendations here on undergraduate housing is dependent on the outcome of a report on graduate housing.

Having set the scope of our study, we still had before us a considerable task. The Stanford residence system is one of the most varied, programmatically and physically, of any University in the country. In 1973-74, there were 64 distinct residences to which undergraduates were assigned. The data on each of these individual units and on the whole system have not been easy to compile or to interpret. We have relied heavily on records of student behavior, and we have counted each student's decisions and choices. The assistance of students in gathering and interpreting the data, especially the work of Ms. Marty Myers, Ms. Susan Richard and Mr. Keith Kintigh, has been extremely helpful to our study.

We felt, too, that we must not be locked into a present-bound, local perspective. Accordingly, we called upon Mr. Michael Korff, a doctoral candidate in the School of Education, to research the issue of student housing throughout Stanford's history and to examine student housing issues at other colleges and universities. His task led him to the University Archives and to the files of offices throughout the University. The con-

struction of a record of the student residences in use during the past decade was in itself a difficult task and involved, among other things, determining the occupancy of buildings long since torn down and ascertaining which units were used in which years. He also picked the memories of current and past faculty members and administrators, and he interviewed Deans of the Schools and other selected officials to obtain their impressions and opinions of student housing.

We believe that the problem we decided to examine and the strategies we adopted to examine it permit a useful look at the main question facing Stanford's residence program today. We also believe very strongly indeed that our findings, by documenting an urgent need for more undergraduate housing at Stanford and by making specific recommendations about how to meet the need, help to answer that question.

STANFORD AS A RESIDENTIAL UNIVERSITY:

AN HISTORICAL PERSPECTIVE

"It is desirable so far as may be that the faculty and students should reside on the University grounds."
—Mrs. Stanford, 1897

"All undergraduate activities being on the Farm, Stanford has been from its inception distinctly a residence university." *Stanford Days* (c. 1933). (This sentence from a booklet sent to prospective applicants begins a section entitled, "A Strictly Residence University.")

"The announced long range policy of the University, as the ideal, is ultimately to house all undergraduate students, men and women, in University facilities on the campus, except those who because of reasons of their own are permitted by the University to live off campus." *Minutes of the Committee on Academic Affairs of the Board of Trustees, Stanford University* (1957).

"The Committee affirms the ideal of the residence University: that 'living and learning, social and intellectual life, should not be separate but together . . .' Finally, to be able to implement its ideals, the University should make increased efforts toward providing enough residences that all undergraduates who wish can live on campus and toward achieving equity of physical facilities and available program support through its residence system." *Study of Education at Stanford: Report to the University #3: University Residence and Campus Life* (1968).

"Stanford is dedicated to education, and the residences are a big part of that education. People learn many different things in a residence, and they learn in many different ways." *Approaching Stanford* (1970).

"We believe that Stanford's academic, intellectual, and educational interests are at stake within residences as well as within classrooms, and that the University should accept wholeheartedly the responsibility for providing in the residences an environment that will support the student in the effective development of his own identity and will aid him in becoming a well-educated person, whose education is fully integrated with all other aspects of his personality." *Report of the Presidential Ad Hoc Committee on Residential Education* (1971).

"The residence program at Stanford is central to the student's continuing education. Thinking hours and living hours are not mutually exclusive but mutually definitive, and this attitude greatly contributes to the whole of a Stanford education." *Why Stanford?* (1973).

From the earliest days of the University, the importance of student residences as a vital part of undergraduate education at Stanford has been recognized. An historical survey of the documents which have commented on undergraduate residences at Stanford shows that the issues and implications of what it means to be a residential University have been periodically reviewed and that every student, faculty, and administrative group reviewing the residence program strongly reaffirmed the wisdom of Stanford's commitment to be a residential University. There have been consistent calls for modifications and improvements, and the form of the residence program has evolved over the course of the years, yet the basic residential context of

Stanford's undergraduate education has remained constant. Stanford residences have been the focal point of student life outside the classroom and the setting for much of the intellectual, personal, and social development of Stanford undergraduates.

Although residence development has been a matter of concern and attention throughout Stanford's existence, for our purposes here the studies and recommendations of recent years are most directly pertinent to our current situation. Between 1967 and 1971 alone, there were six separate studies of Stanford residences.[1] All studies responded to a specific presidential charge, and all studies were conducted by committees whose members included students, faculty, and staff. While each study addressed itself to a particular set of problems, each study explicitly or implicitly agreed with the following fundamental judgments:

1. Undergraduate residential life is an important and integral part of Stanford;

2. Living on campus offers students significant advantages in attending and participating in a wide variety of aesthetic and intellectual activities;

3. Living groups themselves are replete with educational opportunities--programs, speakers, faculty visitors, small group instruction, and the like;

4. In addition to the educational programming the University sponsors in the residences, one of the most positive educational aspects of the residences is the interaction among students themselves--an interaction which students have

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[1]The six studies are: UNIVERSITY RESIDENCES AND CAMPUS LIFE (volume III of the STUDY OF EDUCATION AT STANFORD); LIVING AND LEARNING AT STANFORD (contained as an appendix in SES III); REPORT OF THE [PEARSON] COMMITTEE ON 1969-70 HOUSING PROBLEMS; REPORT OF THE [LELAND] COMMITTEE ON NEW UNDERGRADUATE LIVING IDEAS; [PACKER] STUDY OF RESIDENTIAL LIFE; and, REPORT OF THE AD HOC [MAYHEW] COMMITTEE ON RESIDENTIAL EDUCATION.

credited as being one of the most important sources of intellectual, personal, and social growth;[2]

5. Since the on-campus residential experience is an important part of undergraduate education at Stanford, all undergraduates who wish to live on campus should be able to do so; students should be able to choose among a variety of educationally oriented living group choices; and with the significant exception of the freshman year, there should be no mandatory residence requirements.

The recent paper by James L. Gibbs, Dean of Undergraduate Studies, "Stanford Undergraduate Education in the Seventies: A Call for Educating the Whole Person" and the preface to this study, prepared by Stanford's Dean of Admissions, Fred A. Hargadon, comment on the current and future importance of undergraduate residences at Stanford. Indeed, the very homogeneity of informed opinion, past and present, on the importance of maintaining Stanford as a residential University leads us to conclude that assembling yet another student-faculty committee to consider the desirability of providing more on-campus residences will not move us forward. We believe that the issues now center not on the desirability of providing educationally oriented residence space for all who want it, but the feasibility of doing so. The real issues concern costs, the incremental quantity which is needed and can be fully utilized over the long run, and the kind of housing which would be most suitable to Stanford's overall residence program. These issues are explicitly addressed in the sections below, but in order to put our analysis in proper perspective, we wish first to recount recent efforts to augment Stanford's residence capacity.

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[2]See SES, volume II, UNDERGRADUATE EDUCATION, p. 65. The findings of SES were confirmed in some taped interviews conducted in the residences in the Spring of 1973 by David Dorosin, M.D., Director of Counseling and Psychological Services, and Larry Horton, Associate Dean of Student Affairs/Residential Education.

THE RECOMMENDATIONS OF SES AND WHAT HAPPENED TO THEM

The Study of Education at Stanford (1968) included a comprehensive study of the undergraduate residences at Stanford. Both the Committee on Residence Programs and Policies and the Steering Committee of SES recommended (1) a policy framework for Stanford's residence program; (2) some operational guidelines, including priorities for allocation and assignment of spaces; (3) the upgrading of physical facilities and the reduction of occupancy in current residences; and (4) the construction of new residences.

The first two recommendations have been implemented by the development, as called for by SES, of a variety of housing options, including coeducational and special program houses, and the development of a University Housing Draw which enables students, based on equal chance and objective priorities, to choose the residences to which they wish to be assigned. The third category of recommendations has not fared well: only limited upgrading of facilities has been accomplished, and the occupancy level has not been reduced at all. The resources to support significant upgrading have not been available, and the critical shortage of housing has not permitted reduction of occupancy. We note the desirability of implementing these recommendations when conditions permit.

The recommendation to reduce occupancy is, of course, inextricably linked to the recommendation to construct new residences, and it is the latter recommendation which is of most importance to this study. SES recommended that, "As a matter of highest priority, the University should undertake the construction of new coeducational residences for about 500 undergraduates. The design of these residences should provide for the privacy of single rooms combined with facilities for entertaining."

This call for more residences flowed directly (1) from SES's conclusion that residency is an important part of undergraduate education at Stanford and should be available to all students who want it and (2) from the stark reality that many students who wanted on-campus residency were being denied it.

The SES recommendation came in November of 1968. On March 4, 1969, President Pitzer appointed a committee, under the chairmanship of Professor Scott Pearson, to study the "emergency needs of the university residence system." The charge to the committee requested recommendations in three areas: (1) the need for more student housing; (2) allocation priorities for housing space; and (3) staffing arrangements in residences. The Pearson Committee's attention was focused wholly on the short-run housing situation. Their task was to recommend a course of action which would deal with the 1969-70 academic year, which was then only months away. Working under extreme time pressure to respond to the three-part presidential directive, the Pearson Committee recommended (1) the erection of 120 mobile homes as a temporary measure to alleviate the housing shortage; (2) a priority allocation system; and (3) some possible staffing alternatives to be considered by a future committee. The time pressure on the Pearson Committee's work was so great that the report was not issued until June 3, 1969, several weeks after the Board of Trustees had approved an interim recommendation for the construction of a mobile home area. Manzanita Park, the mobile home area, opened in September 1969, and has now completed its fifth year of operation. Manzanita Park will be discussed in greater detail below.

To deal with long-range residence matters, President Pitzer established on March 13, 1969, the Committee on New Undergraduate Living Ideas under the chairmanship of William Leland. The committee, charged to recommend a new residence within the cost-per-student range of existing units, issued

its report in November, 1969. The report called for the construction of housing for 360 to 480 students in six to eight houses set around a central eating facility. Each house was to have a faculty resident and his or her family and two graduate tutors. Although the committee members labored diligently and gave considerable attention to developing a model for a desirable student residence, the Committee Report was incomplete. Information and data on demand were found only in a brief footnote. Serious programmatic questions which had been partially responsible for scrapping earlier residence projects, the Moore and Jacks Houses, were not discussed at all by the Leland Committee Report, even though the concept of the proposed residence was extremely close to the Moore and Jacks plans. Finally, an analysis by the University Controller's Office of the "somewhat visionary state" of the proposed program concluded that the "order of magnitude estimates of project costs indicate that the proposed program will far exceed the cost (adjusted for inflation) of any existing unit, perhaps by even half again as much." The recommendations of the Committee on New Undergraduate Living Ideas were not accepted, and the issue of new permanent undergraduate residences has languished until now.

The one new permanent addition to the undergraduate residence system during these years did not result from any committee recommendation for an undergraduate residence. The long waiting lists for married student apartments plus the recognized demand for more housing for single graduate and undergraduate students and the sudden availability from the Department of Housing and Urban Development of an extremely attractive loan opportunity led to the decision to build Increment Five of Escondido Village and to include in Increment Five a four-story apartment building capable of housing 288 persons in 144 one-bedroom apartments. This HUD money was obtained for construction of apartment units, and the design and construction was guided by a new management concept developed by Stanford business officers.

Although the University Business Office and the Dean of Students Office supported the project, this addition to the Stanford residence plan was not the full response to housing envisioned by SES. Indeed, the decision on what categories of students should be allocated the spaces in the four-story building was not made until the building was nearing completion, and the final allocation resulted in a net increase of 108 spaces to the undergraduate residence system.

Except for part of the construction of Escondido V and the erection of a temporary trailer park, there has been no positive response to the SES recommendation for new undergraduate residences. To those who ask why, the following circumstances can be pointed out, any one of which could block effective planning for new residences:

1. From 1968 to 1972, the University was in a period of internal turmoil and uncertainty. The confusing issue of what to build, if indeed the University should build any new student housing, was not one of the pressing issues to University decision makers in these years, and the one report which did recommend implementation of the SES call for new undergraduate residences was inadequate.

2. The residence system itself was undergoing a major transformation from a predominantly single-sex housing system, just recently unshackled from parietal regulations and with relatively few options, to a predominantly coeducational system with a variety of options, including cooperatives and special program houses. Cluster III illustrates the changes during these years. In 1968, Cluster III opened with five 50-man fraternity houses. Almost immediately problems developed. One by one the fraternities in Cluster III collapsed as all-male living groups, and each demise was generally accompanied by a litany of abuse against the University for constructing those houses. It was sometimes alleged that the houses were not suitable

for successful independently operated living groups. Each house was eventually converted into a coeducational residence with the students in each house assigned through the University Draw. By 1973, all five houses were coeducational, two had special programs, and Cluster III had developed into one of the most popular living areas in the University.

3. During this transitional state, there were major tasks undertaken by those responsible for the residence program, tasks which did not permit adequate time to be spent on the question of new housing. For example, the Pearson Committee's incompleted task, i.e., the matter of staffing in the residences, was taken up in 1971 by two presidential commissions, the Packer Committee and the Mayhew Committee. Implementation of the final recommendations on staffing consumed much of the staff efforts in the Dean of Students Office. Also during this time, the University Draw program was developed and with little fanfare completely rewritten to enable flexibility and equity to be wedded in the assignment procedures.

4. As the change in the residence patterns was under way, there was necessarily an absence of adequate data. A data base from which sound decisions could be made had to be created. That task, which is still incomplete, has been partially accomplished.

5. During this period, stability was sorely absent in the program office which had the responsibility for advocacy of student residences. From 1968 to the present, there have been three Deans of Students and two Acting Deans, one of whom was in office longer than the previous full Dean, and there have been four Associate Deans for Residences. In a condition of such rapid turnover, institutional memory is not only lost, but the urgency of day-to-day operations and organizational matters will always preempt long-range planning.

Given the factors listed above, it may be just as well that new residences were not constructed. We have learned much since 1968. We now have ample experience with coeducational housing, we have experimented with apartment units, and we have a data base which will be extremely useful in helping to determine what kind of residences should be constructed.

THE DEMAND FOR AND THE SUPPLY OF UNDERGRADUATE HOUSING: AN ESTIMATE OF NEEDED NEW HOUSING SPACES

Introduction

The need for housing at a given point in time is simply the excess of demand over the supply. Basically, the Study Group proceeds in this section to make this measurement in 1973-74 and calls for the number of units required to fill the gap. A measurement in one period, of course, must be tempered by an understanding of those forces affecting housing demand in the past and those likely to do so in the future. The first two parts of this section, therefore, are devoted to a description of the demand for and supply of undergraduate housing in the last decade and the forces of change which have exerted themselves during that period. The third section is a presentation of the criteria, the approach and the background information to estimate the current incremental housing demand, and finally the study group's estimate of that demand.

Outline

A. Undergraduate Housing Demand, 1963-74
   1. 1963-4 through 1967-8
   2. 1968-9 through 1973-4

B. Undergraduate Housing Supply, 1963-74
   1. Decrease in capacity per student
   2. Increased dependency on temporary facilities

C. An Estimate of the Current Demand for the Addition of Incremental Housing.

Undergraduate Housing Demand, 1963-74

Stanford's single undergraduate housing during the last decade, and to a large extent the demand for housing during the period, can be best

characterized by splitting the decade into the roughly equal periods between 1963-64 and 1967-68 and between 1968-69 and 1973-74. In the first part of the decade enrollment was essentially constant, the character of on-campus housing stable; and apparently, little data was generated to assess demand for on-campus housing as we think of that demand today. In the second half of the decade single undergraduate enrollment was increased by an average of 144 students per year (a six-year total of 862), the nature of on-campus housing changed considerably, and after these changes and with the advent of the Draw, more reliable data has become available about student preference both between off-campus and on-campus housing and among on-campus options. We can conclude from these observations that (1) the concept--at least a readily understood concept--of "housing demand" over a long period of time is illusive and (2) the data to which we look for stability in judging demand is available for only the last several years.

1. 1963-4 through 1967-8. Stanford as an institution has changed dramatically in the last twenty years--even in the last ten years. The housing system has shared in these dramatic changes and it becomes important when discussing housing demand to remind ourselves that the student making housing choices ten years ago faced a much different system than he or she does today. For example:

-In 1963-4 100% of the single female undergraduate population was required to live on campus. Today, only freshmen women are required to do so. Only 71% of the sophomore, junior and senior women now live on campus.

-In 1963-4 there were 24 all male fraternities. Today there are 12 all male fraternities.

-In 1963-64 no single undergraduates were living in co-ed facilities on-campus. Today 86% of all single undergraduates living on-campus are

in co-ed facilities. Note the dramatic increase in living options for on-campus non-fraternity men. In 1963-64 only Stern and Toyon were available on-campus for upperclass non-fraternity males. Now there are only four houses on-campus where there are no men assigned.

-In 1963-64 Stanford still had strict parietal regulations. Women, for example, were required to sign out if they went out of the dormitories in the evenings and had limited numbers of 1:30 a.m. and 2:30 a.m. sign-out privileges per quarter.

-At any time in the last five years over 10% of the single undergraduate student body has been housed in common-interest or "theme" houses, including those of minority groups.

-In the past five years the University has made a much greater effort to integrate the student's academic and residential experiences. Freshman advisors are now residence-linked and in 1972-73 approximately 168 courses were taught in the residences.

Some of the above changes clearly have more impact on demand for on-campus living than others. One of the least important--although much discussed--is the relaxation of parietal hours. It can be argued that the relaxation reflected societal changes and the reduction of regulations probably occurred about as quickly as student expectations changed--leaving a minimal net effect on demand. The changes to co-educational housing and the integration of more academic aspects into the residences, however, are important because they substantially alter the residence experience and offer the student a change to which he can react.

What do we know about housing demand during the mid-sixties? The available information is not a measurement of demand during that period but rather a piecing together of observations which might allow a conclusion about demand. First, the population of single home-campus undergraduates remained essentially constant during a five-year period beginning in 1963-64 (Table 1 below). Secondly, the supply of on-campus housing dropped by approximately 300 units during the same period. Note that Table 1 does not present demand information but instead shows the population size, the housing supply, and where students lived. One can broadly estimate the

Table 1: SINGLE UNDERGRADUATE ENROLLMENT & HOUSING CAPACITY 1963-75

Year	Home Campus Undergraduate Enrollment	Rated Capacity[2] of Undergraduate Housing		Rated Capacity as of % of On-Campus Enrollment		#Housed Off-Campus or Crowded
		Permanent	Permanent & Temporary	Permanent	Permanent & Temporary	
1963-64	5168E[1]	4106	4365[3]	79%	84%	803
1964-65	5231E	4063	4240	77%	81%	991
1965-66	5277E	4014	4069	76%	77%	1208
1966-67	5266	4059	4059	77%	77%	1207
1967-68	5273	4059	4059	77%	77%	1214
1968-69	5429	4159	4159	77%	77%	1270
1969-70	5573	4159	4619	75%	83%	954
1970-71	5549	4183	4643	75%	84%	906
1971-72	5956E	4183	4643	70%	78%	1313
1972-73	5987	4280	4736	71%	79%	1251
1973-74	6135	4290	4746	70%	77%	1389
	Increase of 967	Increase of 184	Increase of 381	Decrease of 9%	Decrease of 7%	Increase of 586

[1] E-Estimate

[2] Judgment of the number of spaces available. Crowding will increase the number of students actually housed in a facility but not the judgment of how many students should be housed in that facility--the rated capacity.

[3] Including Stanford Village. From 1966-67 through 1968-69 there was no temporary housing with the exception of trailers used by the Alpha Sigma Phi fraternity.

the part of the total off-campus students who wished to live off-campus as distinct from those who were forced off campus. Thirdly, some demand was apparently perceived as the University proceeded to the point of construction with the Moore and Jacks Houses (with a capacity of 560) and also allowed a group of fraternities to relocate with an expansion of 120-150 students in their total capacity. The increase in house size from 30-40 to 50 was required by an economy-of-scale hurdle in food preparation expense; but the additional male demand must have been perceived. In sum it does appear that by 1967-68 there was an excess of demand for housing at least the size of the ill-fated Moore and Jacks Houses--approximately 560 spaces.

2. 1968-9 through 1973-4. Since approximately 1968-69 there have been five potential forces which could have increased demand--the first three of which are measurable at least as far as the potential impact they may be having on demand. First, the size of the home-campus single undergraduate student body has increased by 706 or 13% since 1968-69 (see Table 1 above). Secondly, most of the increase in the size of the single home-campus undergraduate student body is due to the increase in the undergraduate student body as a whole, but some of it results from a decrease in the number of married undergraduates. The number of married undergraduates dropped from 298 in 1970 to 117 in Autumn 1973. Thirdly, part of the increase in the home-campus single undergraduate student body size is due to the smaller enrollment at the Overseas campuses--from a high of 400 in 1966-67 to 185 in Autumn 1973.

The effect of the remaining forces which could have increased demand are not easily measured. Fourthly, the number of students on-campus living in co-educational facilities has increased from zero in 1966-67 to 87% in 1973-74 (97% if the all-male fraternities are excluded). Fifthly, the residences have become the focal point of greater academic activity in the last few years; as noted earlier, 168 courses were taught in residences in 1972-73.

One should also note that in the past five years the addition of Draw data and an increase in the amount of other data are allowing increasingly accurate demand estimates to be made. For that reason one should expect to see continually revised estimates of demand in coming years. It would appear from information and trends known now that these refinements will produce higher, rather than lower, demand estimates.

Undergraduate Housing Supply, 1963-1974

In 1963-64 Stanford was capable of housing almost 84% of its undergraduate student body. A review of undergraduate enrollment and housing

capacity data since that time shows that the University has (1) decreased the per student housing capacity and (2) increased its reliance on temporary vs. permanent housing. More specifically:

1. Decrease in capacity per student. Since 1963-64 the size of the undergraduate student body has been increased by 19% while on-campus housing has increased by 9%. Stated differently, Stanford's capacity to house the single undergraduate student body has dropped from 84% to 77% in the last decade (see Table 1, column 5). Converting the seven percentage point decrease to the gap in the number of housing spaces perhaps makes a more graphic illustration. If the University were to have maintained the 1963-64 84% standard, the supply in the last decade would have to have been increased by 380 more spaces--approximately the number of spaces in a combination of Toyon Hall and Branner Hall.

2. Increased reliance on temporary housing. The increased reliance on temporary housing is remarkable both from an educational and a financial viewpoint for we can begin to see that the solution to the current "crisis" must also contain elements of a permanent solution to the 1969 housing crisis as well. At the same time that the University's capacity to house undergraduates has decreased, the amount of temporary housing has increased to nearly 10% of the total supply because of the construction of Manzanita Park. These statistics claim importance both programmatically and financially. A substantial part of University housing now consists of units which are not just different architecturally, but which can be said to inhibit the level of educational programming and social activity which are an intended part of Stanford undergraduate residential life. Financially, the construction of temporary housing in 1969 constituted the postponement of a large capital investment. Thus, building to solve the incremental

pressure problem is only part of the potential financial housing liability. Only 45% of the recommended units are based on demand which has developed in the five years since 1969; the remainder represent a need for construction of permanent units which was postponed in 1969 by the construction of the temporary Manzanita Park facility.

An Estimate of the Current Demand for the Addition of Incremental Housing

Having reviewed the recent histories of housing demand and supply, the study group in this section would like to focus on demand and to calculate the specific number of spaces the University should build to close the gap between supply and judged demand.

Criteria. The reader should take some care to appreciate the question we ask before moving too quickly to the answer. It was not our intent in this section to issue an estimate of broadly-defined housing demand as was the case above, but rather the best estimate given the constraints below. Specifically: first, because of the gravity to the University and the student body of a large and long-term financial commitment for housing, efforts were made to present a documented case solid enough to justify large capital commitments. Second, estimates for incremental space need are made based on the narrowly defined group of unhoused undergraduates:

1. who would live in facilities which the University would be likely to build (i.e., comparable to its current dormitories or houses),
2. who would fill new spaces for the entire academic year, and
3. whose need we can measure at this time with reliability.

Approach. The Study Group bases the largest part of the case for incremental housing on the evaluation of waitlists at the beginning of 1973-74 and only partly on Draw information. Although the Draw is a

unique housing distribution system, the data it generates does not always answer the question, "How many incremental spaces should be built?" For example, the number of students entering the Draw in the Spring provides a count of the number of students who are interested in the Spring to some degree in some kind of Stanford housing in the Autumn. Properly interpreted waitlists, on the other hand, register the student voting for housing choices as he is prepared to act on them as the quarter begins.

There are two pieces of Draw information, however, which the study group does feel appropriate to include in estimating demand beyond that shown in waitlists: (1) the number of students who drop from the draw process solely because their Draw number is too high (not because of restricted housing choices on their part) and (2) the increase of demand shown in the 1974 Draw over the 1973 base year for which calculations were originally made.

Background Information. The estimate of incremental demand by necessity becomes a technical exercise. Recognizing that the readership will vary widely in interest and background on this subject, we have attempted to layer the information so that summary information is initially presented with the reader having the option to select the amount of detail he or she wishes to read. For readers unfamiliar with the Draw, a description of the Draw process, Appendix 4, has been included; it explains the purpose of the Draw, contains a fold-out flowchart of the 1973 Draw Process, and presents a discussion of data interpretation issues.

Conclusion. The study group has reviewed the housing data available and concludes that these is a current undergraduate housing demand of 390 incremental units. The demand is presented by category in Table 2 below and page-number references are provided so that readers may review the

discussions and computations behind each estimate. The study group recognizes that some will judge the demand to be greater. That is perhaps true. We are, however, not prepared to make that case at this time with existing data and under the constraints listed above.

Table 2: SUMMARY OF INCREMENTAL SPACE DEMAND BY CATEGORY
(Discussion of data and computations available on pages noted)

	Demand For Spaces
1. Draw Demand Measurement	
a. Estimate based on 1973 Post-Draw Waitlist Information (four page discussion of data and computation beginning on page 89).	84
b. Students who dropped from the 1973 Draw process solely because of High Draw Numbers (two page discussion of data and computation for 39 persons dropping after the First Round on page 84; one page discussion for 18 persons dropping after the Second Round on page 86).	57
c. Net demand increase in the 1974 Draw (one page discussion of data and computation beginning on page 91).	148
2. Off-Campus Student Demand Measurement	
(Two page discussion of data and computation beginning on page 92).	57
3. Transfer Student Demand Measurement	
(Two page discussion of data and computation beginning on page 93).	62
4. The Elimination of 1973-74 Overcrowding	
(Two page discussion of data and computation beginning on page 95).	120
	528
Less: Potential increase in Overseas Studies Autumn enrollment to 263 (185 Fall Quarter. 1973-4).	(78)
Addition of 584 Mayfield beginning 1974-5 less 6 Lagunita spaces	(30)
	420
GROSS DEMAND	
Less: 7% attrition factor to insure full year occupancy	(30)
NET INCREMENTAL SPACE DEMAND	390

THE FUTURE OF MANZANITA PARK

The Manzanita Park mobile home facility for 460 students was established in Autumn 1969 as "emergency housing" in response to what President Kenneth Pitzer termed a "housing crisis." The resolution by the Board of Trustees authorizing the establishment of the Park indicated that it was intended to be in use for three to five years. The 1973-74 academic year is the fifth year. The Study Group has reviewed the Manzanita Park situation and recommends that the University proceed with the replacement of Manzanita Park as soon as it becomes financially feasible.

Calling for the replacement of Manzanita Park because it was originally intended to be temporary is not in itself a sufficient reason for replacement. Had Manzanita been a success as an undergraduate residence, we might, instead of calling for its replacement, seek to extend Manzanita Park's projected life indefinitely or even to propose construction of more trailers to fill incremental housing needs.

Instead, the Manzanita Park replacement is sought on programmatic grounds. Bluntly put, Manzanita Park is an unsatisfactory undergraduate residence--not because it is unattractive, not because the units have thin walls, but because the facility, largely because of the architecture, cannot provide the most important elements of successful undergraduate life at Stanford--group living and dining--characteristics which all other undergraduate residences except Mirrielees share.

The longer Manzanita Park remains on campus, the less it must be evaluated as emergency housing--for which it has been a success--and the more it must be evaluated as an undergraduate residence--for which the significant available evidence shows it has been and continues to be generally unsuccessful.

In the remainder of this section we would like to (1) present data describing student perceptions of Manzanita Park, (2) briefly describe why there appear insurmountable limits on the quality of residential life, and (3) present two recommendations for the disposition of Manzanita Park.

1. Student Perceptions of Manzanita Park.

As an experiment in apartment-type housing for single undergraduates, there is no question that Manzanita Park has offered for some students an attractive residential option. However, after five years of experience with Manzanita Park one can say with equal certainty that (1) there are far more spaces in the trailers than students desiring to live in them, and (2) the vast majority of the student body seeking on-campus housing have consistently not judged Manzanita Park as the answer to their perceived residence needs.

a. Desirability in the Draw. Since its opening in 1969, Manzanita Park has been one of the least popular residences in the Draw. Stated differently, for the entire five years of the existence of Manzanita Park, students have preferred to live almost anywhere else on campus. The only residences ranking below Manzanita in the 1973 Draw measurement of unmet demand were two all-male houses (see Table 3).

Table 3: UNMET DEMAND RATIOS FOR SELECTED HOUSES IN THE 1973 DRAW

House	Rank in Unmet Demand Ratio	Unmet Demand Ratio
Casa Eucalypto (Lagunita Court)	1	31.84
ZAP House (Cluster III)	20 (median)	3.48
Mirrielees House	37	.19
Manzanita Park	38	.06
Phi Sig House (all-male)	39	.00
Kappa Sig House (all-male)	40	.00

Unmet Demand Ratio: the number of students selecting this choice who either were assigned to a less preferred choice or were unassigned.

b. Inter-residence Reassignments During the Year. Once students are assigned to Manzanita Park they choose to leave at a much higher rate than students do in any other residence. Given the perceived undesirability shown in the Draw information above, perhaps one should expect some desire to get out of Manzanita Park once assigned. Available data about the number of people who receive reassignment during the year resoundingly confirm such an expectation. Nearly one-third of the students assigned to Manzanita Park ask for and are assigned to other housing during the year (see Table 4). And at the end of the year, the percentage of students in Manzanita Park who enter the Draw and choose to return is the lowest in the system. In the 1974 Draw, only 75 of 267 eligible students indicated a choice to return to Manzanita Park, a facility of 460 spaces.

Viewing Manzanita Park reassignment level within the context of the entire housing system is also useful. Of all students seeking reassignment within the residence system for Winter Quarter 1974, over one-third (104 of 301) were from Manzanita while only 11% of the single undergraduates live in Manzanita. The figure 104 also

Table 4: PERCENTAGE OF STUDENTS WITHIN EACH HOUSE TYPE REASSIGNED DURING 1972-73 TO ANOTHER TYPE OF HOUSING*

	Men	Women	Total
Apartments (Mirrielees House)	6.3%	13.3%	9.3%
Coed Residences**	11.0	16.0	13.0
Single-Sex Housing***	24.7	21.2	22.2
Trailers (Manzanita Park	20.6	47.9	31.9

*This counts only those students actually reassigned, not all students requesting reassignment.
**Two coed residences (both with special minority programs) account for a disproportionate number of reassignments. If those houses are subtracted from the coeducational house data, the percentage of students requesting reassignment from the other 29 coeducational houses drops to 7.1%
***Two men's and five women's houses.

represents nearly 25% of the 460 residents of the Park (note the difference between seeking and actually receiving reassignment; the number seeking reassignment is higher than those actually reassigned and therefore comparison of the two data can be done only in approximation [see Table 4]).

c. Off-campus Preference. Even when faced with the prospect of having to live off-campus, many students choose not to live in Manzanita Park. Nearly 39% of those students on waiting lists with no housing assignment would rather live off-campus than live in Manzanita Park. Of the 478 students who were unassigned in the 1973 Housing Draw and who were seeking assignments over the summer, 186 excluded Manzanita Park as a housing option. Table 5 compares the exclusions of Manzanita Park with the exclusions of other options.

d. Vacancies in Manzanita Park. After the beginning of each quarter in the regular academic year there are often vacancies in the undergraduate housing system that are difficult to fill because they occur mid-quarter after off-campus students have made arrangements for the year. When all possible reassignments are made, these "unfillable" vacancies often collect in Manzanita Park as recorded in Table 6.

Table 5: WAIT-LISTED STUDENTS EXCLUDING HOUSING OPTIONS

Excluded Option	Number of Exclusions	Percentage of Wait-Listed People Excluding This Type*
Apartment (Mirrielees House)	132	16.8%
Single-Sex Housing	158	33.0
Trailers (Manzanita Park)	186	39.8
Coeducational Housing	5	1.5

*This column does not add up to 100% because students may exclude more than one type of residence.

Table 6: VACANCIES IN THE STANFORD UNDERGRADUATE HOUSING SYSTEM BY DATE AND SEX

	WOMEN'S VACANCIES			MEN'S VACANCIES		
Date	Total in System	In Manzanita		Total in System	In Manzanita	
1/10/71	38	16	42%*	28	12	43%*
1/6/72	12	4	33%	0	0	--
10/20/72	9	1	11%	6	3	50%
1/10/72	25	14	56%	22	15	60%
3/16/73	82	50	61%	78	40	51%
3/17/73	12	5	42%	2	2	100%

*Vacancies in Manzanita Park as a percentage of all vacancies.

NOTE: Manzanita Park has 456 of 4295 single undergraduate spaces (not including fraternities) and therefore one would expect 11% of any system vacancies to appear there.

2. Are there insurmountable problems in maintaining a satisfactory quality of residential life in Manzanita Park? The program component in Manzanita Park has varied in approach since 1969. Currently, the Park has a Director with secretarial support and four student staff who are directly involved in programming. It might seem that one option to replacing Manzanita Park would be to increase the level of program support. Within the residence system there are houses--both those with higher and those with lower per student program expenditures--which are more popular than Manzanita Park. However, in the opinion of the Study Group, a discussion of program levels disregards the major--and ultimately insurmountable--obstacle to the success of the facility: architecture. In the case of Manzanita Park, program increase may constitute an amelioration but not a substantive change in what the facility can provide its undergraduate residents.

Staff evaluations and student surveys, including many discussions

between staff and students about life in the trailer park have demonstrated that Manzanita is unpopular among undergraduates because it cannot provide the essential feature which successful undergraduate residences offer: the interaction among students themselves on a casual, continuous day-to-day basis which for many is the most important aspect of living on campus. An expression of the situation may best be represented in anecdotal format. A recent meeting of student representatives from the trailers discussed the problem of isolation and unhappiness among students in Manzanita Park. The sentiment most often expressed by students was that no matter what programs were sponsored to increase interaction among trailer residents such activities would always have to be contrived and the residents cajoled into participation because the physical arrangement of Manzanita Park inhibits spontaneous or sustained generation of activity, conversation, or friendship.

3. Recommendations regarding Manzanita Park.

a. The University should proceed immediately with the planning necessary to construct 460 permanent spaces to replace Manzanita Park.

b. Manzanita Park should continue to be used for student housing until the replacement units are ready for occupancy. See page 51 for the discussion of financial impact of retention. The future of Manzanita Park should be thoroughly reviewed at the time the replacement units are ready. Since we anticipate that the replacement units will be ready for occupancy for the Autumn Quarter 1981 (see page 36 for the construction timetable), a review of Manzanita Park should be undertaken by the Office of the Dean of Student Affairs and the Office of Housing Management during the academic year 1980-81 and recommendations on Manzanita Park's future submitted to the President no later than June 1, 1981. Just a moment's reflection shows that several options will be possible. Of the possible scenarios: (1) housing demand continues to rise, and even with a substantial increase in the housing system capacity, there may be enough demand to keep all or part of Manzanita open, perhaps with a reduction from four to three students per trailer, (2) undergraduate demand stabilizes and Manzanita Park would be reduced to three-person occupancy for single graduate students, (3) Manzanita Park would be completely dismantled and the site used for other purposes.

RECOMMENDATIONS ON THE QUANTITY OF NEW HOUSING TO BUILD, PLANNING STRATEGIES, QUALITY OF NEW HOUSING, AND TIMETABLE

RECOMMENDATION:

Because of the importance of student residences to undergraduate education at Stanford and in light of the analysis of supply and demand in the previous section, the Study Group recommends the construction of 850 student housing spaces utilizing the resources and according to the schedule specified below.

Implementation

There are three major matters to resolve in order to implement our recommendation. First is the question of planning strategies, including available sites for student residences, and the realities of fund raising opportunities. Second is the quality of housing which the University can afford given the financial realities. Finally, a timetable for planning and construction is proposed.

Planning Stragegies

If sufficient financial resources were extant, the Study Group would recommend moving forward as quickly as possible to design and construct the 850 beds. As the following chapter concerning financial feasibility will show, sufficient resources do not currently exist and a stragegy is required to obtain new beds as soon as possible.

With the foregoing in mind the Study Group believes that the 850 bed requirement should be undertaken in two stages. Stage I calls for the construction of 150 beds on an accelerated time schedule within the next twenty-four months. Stage II would address the remaining 700 beds on a longer time axis.

Stage I calls for the construction of three new Row houses of approximately 50 students each. Small group living has been singularly successful

over a long period of time. Row houses have constantly been among the most popular of the available residences in the draw. We also believe that the essential design concepts of Row houses are known and popular with all constituencies and that there exists sufficient agreement on the desirability of Row houses to allow immediate steps toward design and construction. Our target date for occupancy of these houses is September of 1976.

State II involves the creation of 700 new beds in the housing system. This number allows and in fact demands that more attention be paid to program parameters in order to maintain the diverse nature of the University's housing system. Further, the magnitude of costs associated with 700 beds suggests that the completion of Stage II may have to extend over several phases as funds become available from fund-raising activities.

The Study Group believes that the 700 bed addition ought to be programmed at one time to insure that sufficient attention be paid to common facilities for student living, e.g., dining and recreational needs. The plans should be taken as far as schematics. However, working drawings which lead to construction should not begin until funding has been arranged. As noted in the financial section, this may mean that Stage II will be constructed in phases.

Recommended Site for Stage I

Because of anticipated economies in building three houses on the same site and because of the operational flexibility in having the three houses together (i.e., the potential for combining programs and food preparation in two or three of the houses as well as for separate operation), the staff recommends putting all three houses on the same site.

The University Planning Office has identified four potential sites for three new Row houses clustered together. Table 7A is a map showing these sites. Table 7B is a chart showing comparative data on these sites.

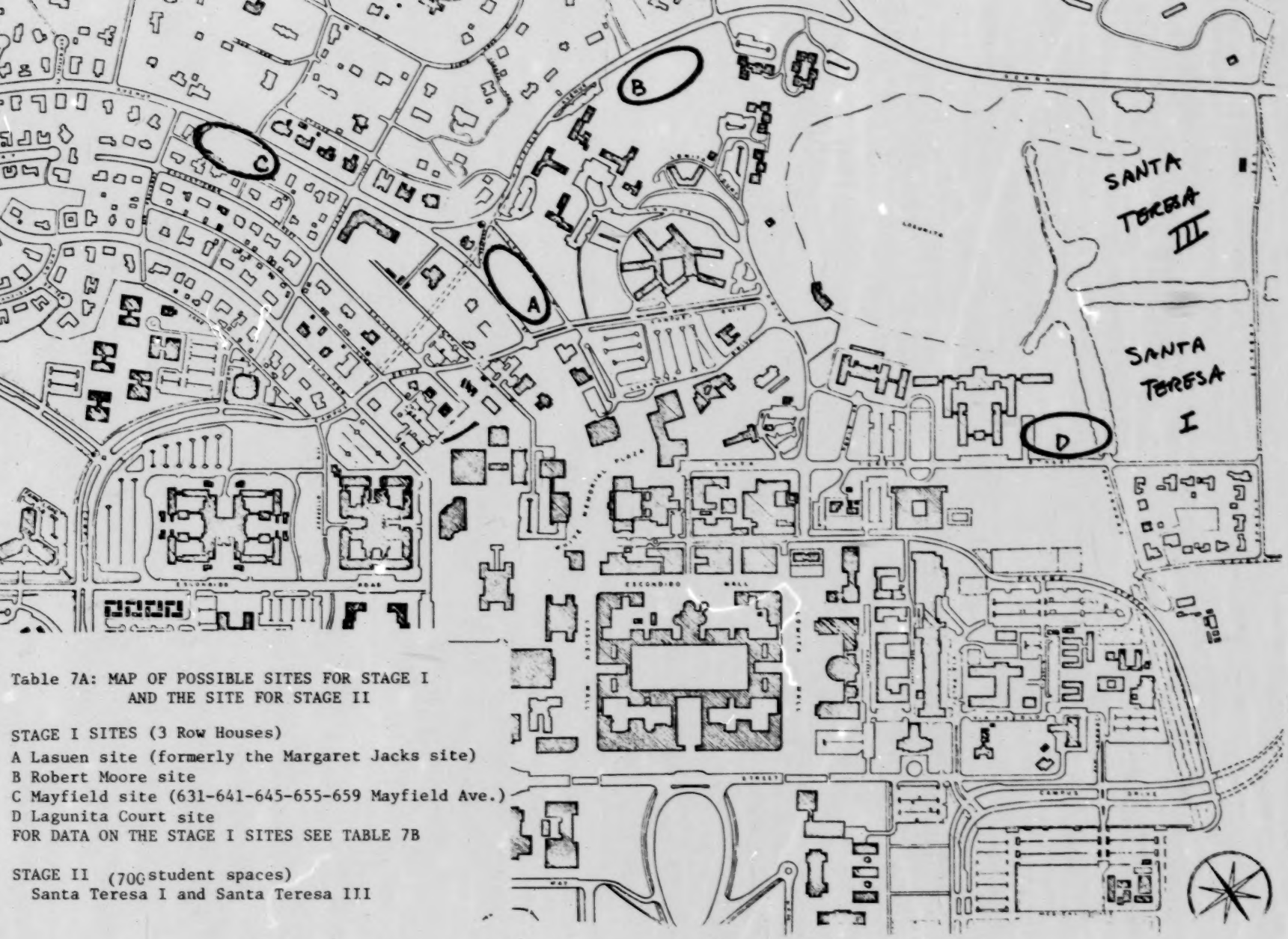

Table 7A: MAP OF POSSIBLE SITES FOR STAGE I AND THE SITE FOR STAGE II

STAGE I SITES (3 Row Houses)

A Lasuen site (formerly the Margaret Jacks site)
B Robert Moore site
C Mayfield site (631-641-645-655-659 Mayfield Ave.)
D Lagunita Court site

FOR DATA ON THE STAGE I SITES SEE TABLE 7B

STAGE II (700 student spaces)
Santa Teresa I and Santa Teresa III

7B: ANALYSIS OF PHYSICAL CHARACTERISTICS OF VACANT SITES FOR OCCUPANCY BY CLUSTERED ROW HOUSES[1]

ion	Size	Student Density Per Acre[2]		Land Use Designation	Availability of Utilities	Access
asuen (Jacks) Site portion)	155' x 500' (77,500 sq ft) (1.78 acres)	84		High Density Housing	Yes	Excellent via exist ing stree
obert Moore Site	300' x 600' (180,000 sq ft) (4.13 acres)	36	48[3]	High Density Housing	Yes	Ditto
31-641-645-655- 69 Mayfield Ave.	125' x 467' (58,375 sq ft) (1.34 acres)	112		Low Density Housing	Yes	Excellent via exist ing stree and alley
W'ly corner of ndeveloped agunita Ct. Site	200' x 325' (65,000 sq ft) (1.5 acres)	100		High Density Housing	Elec. & Gas may be inadequate if extended from Lagunita Court	Excellent via exist ing stree

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nes 150 student spaces. [3]Assumes 200 student spaces.

CLUSTERED ROW HOUSES[1]

Availability of Utilities	Access	Parking Availability	Topography	Appropriate Nearby Land Uses	Inap Nearby
Yes	Excellent via existing streets	Difficult to provide on site	Graded from previous fraternity occupancy --no problems	Beta House across Lasuen Sigma Chi across Campus Dr. to north, Lasuen House across Campus Dr. to south.	Facult across
Yes	Ditto	Possible to develop on site	Natural slopes need contouring and shaping	Clusters I and II on either side	1 facu ectly 3 othe siding
Yes	Excellent via existing streets and alley	Possible to develop on site	Virtually flat with slight slope to rear	Across street from relocated Hurlburt and Durand	Single reside to rea sides
Elec. & Gas may be inadequate if extended from Lagunita Court	Excellent via existing streets	Possible to develop in conjunction w/existing Lag Ct Pk'ng	Virtually flat with slight slope to front	Adjacent to Lagunita Court on 2 sides, & opposite Women's athletic field	None

/r.

ss	Parking Availability	Topography	Appropriate Nearby Land Uses	Inappropriate Nearby Land Uses
llent exist- streets	Difficult to provide on site	Graded from previous fraternity occupancy --no problems	Beta House across Lasuen Sigma Chi across Campus Dr. to north, Lasuen House across Campus Dr. to south.	Faculty residence across Lasuen St.
o	Possible to develop on site	Natural slopes need contouring and shaping	Clusters I and II on either side	1 faculty residence directly across Mayfield & 3 others backing to or siding across Mayfield
llent exist- streets alley	Possible to develop on site	Virtually flat with slight slope to rear	Across street from relocated Hurlburt and Durand	Single family faculty residences across alley to rear; ditto on both sides
llent exist- streets	Possible to develop in conjunction w/existing Lag Ct Pk'ng	Virtually flat with slight slope to front	Adjacent to Lagunita Court on 2 sides, & opposite Women's athletic field	None

The Study Group has carefully reviewed the Planning Office analysis and other material and has concluded that in quantifiable terms no site stands out as an obvious choice for three new row houses. The interpretation of this data coupled with the intangibles of esthetics and proper land use is what will determine the proper site. Thus, as usual, the decision will turn on judgment. Our analysis of the sites for clustered row houses follows:

Lagunita Court Site (Site D on Table 7A) - We believe that this site should be reserved for potential use in the planning of Stage II. The Lagunita Court site is adjacent to the Santa Teresa sites and would be on a direct line between the new 700 bed development and the main campus. It is conceivable that this area will be needed to provide recreational or parking facilities for either Lagunita Court or the Santa Teresa development. It seems prudent to allow this area to remain unassigned until the early phases of planning and design of Stage II.

Mayfield Sites (Site C on Table 7A) - There seem to be two reasons for not locating student housing on these sites. First, it would represent a further intrusion of student housing into the faculty housing area which might be appropriate only in the absence of alternative sites. Second, and more importantly, there are equally, if not more, important uses for this area. Specifically, we believe that this represents the last remaining site of any consequence where the recreational needs of the faculty homeowners in the older portions of the campus can be accomodated. These sites are a potential replacement for the play fields lost because of the emeritus housing project. Additionally, these sites have long been considered for the next stage of multi-unit faculty housing. The Study Group beleives that as long as alternatives for student housing exist, the Mayfield sites should be reserved for the needs of faculty and staff

either by providing a recreational park or by increasing the supply of on-campus housing.

The Moore and Lasuen Sites (Moore is Site B and Lasuen is Site A on Table 7A) - The staff beleives that these two sites are the most desired sites for the location of Stage I. The choice between these two sites is based on factors involving esthetics and land use.

There are approximately five acres available on the entire Lasuen (Jacks) site and 4.13 acres available on the Moore site. Using only the front portion of the Lasuen site for the three houses and some parking would consume about 1.78 acres leaving approximately three acres for additional parking and recreation. The Moore site does not appear to present the problems of parking which are apparently associated with the Lasuen site. However, extensive grading of the Moore site would be required if houses are to be placed there. Furthermore, the size and shape of the Moore site is such that the row houses the staff envisions as being readily designed and constructed would not likely be judged appropriate for the Moore site. It seems more likely that a new cluster arrangement, perhaps similar to one of the three existing fraternity clusters, would be best suited for the Moore site. Since a new cluster would be a different project than three row houses, more programming time would be required, and consequently, the advantages of quick relief to the housing shortage which the staff has hopes for in Stage I would be lost.

The staff recommends the Lasuen site for Stage I for several reasons. First, it recreates the Lasuen Row and offers the advantage of consolidating that portion of the student residence system. Second, the proposed houses would merely replace the fraternities which existed there until the mid-1960's, and should, therefore, avoid any problems of site development. Third, there appears to be sufficient land available to build new houses,

provide for parking, and to allow development of an extensive play field, perhaps half the size of the well-used Wilbur fields.

"Which of these two sites ought to remain unassigned?" is another question to be asked. The Study Group believes that the Moore site should be left for future use. It is the only portion of the Knoll which has not been developed into student housing. With minimal grading it can be used for a variety of recreational activities, but only after careful planning. Further, current program planning suggests that the Knoll itself will be assigned to support student recreational activities after the Music Department moves to new facilities. The Moore site becomes a valuable adjunct to such an assignment.

Recommended Site for Stage II

Santa Teresa Sites I and III have long been designated on the Master Site Plan for the Campus Development as reserved for student housing. These sites comprising some 21 acres are sufficient land mass to allow a wide variety of possible design and layout for incremental student housing. Transportation patterns (bikes and pedestrians) to the central part of the campus would not be difficult. These sites, we believe, should become the prime location for Stage II of our recommended new student housing.

We believe that the 700 beds in Stage II should be designed for placement along Santa Teresa I and as much of Santa Teresa III as necessary. All of this site would be on the campus side of the extension of Campus Drive and remain an integral part of the University community. Sufficient land area is available for adequate recreation and in fact may already exist through the designation of that portion of the land area around the women's gymnasium as a recreational and playing field. To service students in a recreational and playing field function, additional space can be developed immediately west of Lagunita Court between it and the new development.

Quality

Two distinct types and qualities of new housing are foreseen by the Study Group. As noted, the first increment of 150 spaces would follow the pattern of the traditional and popular Row houses. By the term Row houses, we do not mean a specific exterior architecture. It is estimated that totally to reproduce traditional designs (Colonial, turn of the century Maybeck, 1920 Spanish or similar designs) would cost a premium of 10-15% over what a more contemporary design would cost. The Study Group does not believe that current financial conditions permit lavish historical reproductions. Instead, the staff recommends that the new houses be of contemporary design compatible with the other Row houses and providing the basic features of small group living found in existing Row houses.

For the remaining 700 spaces on the Santa Teresa sites, we envision a cluster or pattern of 10 to 14 houses of 50 to 70 students per house, each architecturally unique, yet compatible with neighboring houses. It is likely that a central kitchen, dining area, and commons would serve all of the houses; otherwise, capital costs and operating costs would be prohibitively high.

The general quality of Fraternity Cluster III (Alpha Sig, ZAP, ATO, Whitman, and Terra) impresses us as the affordable quality level desired for this stage. Characteristics include optimum size (50 residents), room privacy, suitable for co-educational occupancy, separation of common areas from student rooms, and attractive architecture, siting, and landscaping.

In order that some appreciation of relative costs may be gained, the University's Planning Office has prepared Table 8 below, a list of familiar Stanford residences. Cluster III, if repeated in 1976, would cost approximately $27,500 per student.

A detailed analysis of the program for three new Row houses by the

Table 8: COMPARATIVE CONSTRUCTION COSTS FOR SELECTED RESIDENCES

Housing Unit	Date Built	Designed Occupancy	Gross Sq.Ft. Per Student	Historical* Cost/Student	Replacement Cost/Student 9/76
Mirrielees	1971	288	335	$ 7,600	$14,450
Wilbur Hall	1954	748	266	4,570	21,550
Cluster III	1967	255	309	9,820	27,390
Cluster I	1961	204	329	8,330	30,590
Florence Moore	1955	357	326	7,430	33,000
Jacks House (not built)	1967	280	399	15,210	41,990
Lagunita	1934	296	472	2,680	45,570

*Includes design, construction, and furnishings

Planning Office has produced an estimate of $24,000 per space. This permits the construction of about 300 gross square feet per student (including common areas, etc.), starting in the Spring of 1975. The project will thus cost $3,600,000 for 150 students.

Timetable

The Study Group recommends the construction of 850 student beds on the campus in two parts: (1) 150 beds in three houses along Lasuen Street, and (2) 700 beds in a divisible development on Santa Teresa I and III. The purpose of this section is to set forth the following timetables necessary to accomplish these recommendations.

1. Lasuen Street - 150 beds

   a. The construction of three houses occupied by about 50 students each, designed in a style similar to existing Row houses, e.g., frame construction, double-hung windows, three stories, etc.

   b. Timetable

      i. July-September 1974: Define general program outline, site surveys, etc.

      ii. September 1974: Appointment of an architect for Lasuen project.

      iii. September 1974 to August 1976: Design, working drawings, and construction.

2. Santa Teresa - 700 beds

a. The construction of new residences to house 700 students on Santa Teresa sites I and III.

b. Timetable

i. July to September 1974: Appointment of an architect.

ii. July 1974 to August 1976: Design and working drawings.

iii. September 1976: Start construction of the first units if funds available.

iv. September 1978: Occupancy of first units.

3. Program Planning Process

The concept, planning, and design of the two projects will be guided by a working group comprising:

Dean of Student Affairs, Chairman
Provost of representative
Dean of Undergraduate Studies or representative
Vice President for Business and Finance or representative
Faculty Resident Fellow or Former Resident Fellow
Students (2)

Staff support for this group will be provided by the Planning Office.

PAYING FOR NEW HOUSING

Introduction

Many projects at Stanford and elsewhere have been well conceived, completely justified from the standpoint of need, and enthusiastically supported but ultimately have had to be set aside for lack of funds.

The need for additional on-campus student housing seems clear -- at the very least the replacement of 460 spaces in Manzanita Park plus 390 spaces to relieve overcrowding and to accommodate more students on campus. It is the purpose of this chapter to examine the financial feasibility of constructing new student housing by identifying sources of funds and assessing their availability, determining the impact of debt financing upon room and board rates, and comparing Stanford's future room and board rates under several different assumptions against schools with which Stanford competes for undergraduates.

Source of Funds

The plan of action envisioned by the staff study group calls for a succession of housing construction projects over the next seven years at a cost of $25,000,000.

For the plan to become financially feasible, three steps must be taken. First, a specific priority for gift solicitation for housing must be determined in relation to other projects, such as a new library, Quad renovation, Chemistry, and others. Secondly, construction of new housing must be given high priority for low-interest loans. Finally, a positive judgment must be made on the acceptability of the higher room and board rates needed partially to pay for new housing.

1. Gifts - We are fortunate to have a substantial gift for housing already available, as a basis for planning and to attract additional gifts. This is the Robert S. Moore gift, donated in 1961 for the purpose of constructing a student dormitory. With interest accumulations, the original gift of $750,000 will grow to approximately $1,500,000 by mid-1975, the target date for start of construction of three new Row Houses.

The Campaign for Stanford includes a goal of $3,000,000 for a variety of residence purposes -- expansion of resident fellow facilities, refurbishing of existing residences, construction of a fine arts facility, additional teaching space in the residences, etc. It is our understanding that this campaign component has a low priority and that no funds have yet been raised toward the $3,000,000 target. As desirable as the foregoing improvements may be, the staff Study Group believes that construction of new residences should now be given the focus insofar as fund-raising for housing is concerned.

Of prime importance to fund-raising is the size of identifiable "packages." Buildings costing $1,000,000 or less are very attractive to donors and to fund-raisers alike. Over this size, the difficulties mount exponentially. Consequently, the construction of three new Row Houses, costing about $1,200,000 each, makes eminently good sense from the standpoint of their desirability as residences and from their potential for attracting gifts. The design of the major complex of 700 spaces should also take into account these same two factors -- program effectiveness and attractiveness to donors.

Kenneth Cuthbertson, Vice-President for Development, has estimated the fund-raising potential for student housing to be from $3,000,000 to $5,000,000 by 1980. He also believes that a further goal of $2,000,000 is attainable for

the early 1980's. However, Mr. Cuthbertson emphasizes that housing's priority must be re-determined and that success in fund-raising will depend to a large extent upon success in fund-raising for projects having a higher priority. For purposes of this study, a goal of $3,000,000 of new gift support is foreseen as the minimal level of giving needed to make the 850 space program financially feasible.

2. Loans - The University has benefited substantially through federally assisted housing construction loans. All of Escondido Village and the three fraternity clusters were constructed with the substantial assistance of low-interest loans obtained through the College Housing Program, a division of the Department of Housing and Urban Development. The total of such low-interest loans amounts to over $23,000,000.

Unfortunately, this once-reliable source of funds has all but dried up. A moratorium was placed on the allocation of federal housing funds in 1972 and is still in effect. An inquiry to the San Francisco office as recently as May 7, 1974, revealed that the College Housing Program is not operative and a renewal is not expected in the foreseeable future. Accordingly, the Staff Study Group has not included H.U.D. in its list of probable sources of funds.

The most promising loan source by far is the new California Educational Facilities Authority (C.E.F.A.) established in December 1972, and authorized to issue up to $50,000,000 in bonds through 1975. An additional $100,000,000 in bonds may be issued after 1975. For the purposes of analysis in this study, and on the advice of Rodney Adams, Director of Finance, C.E.F.A. terms are estimated to be 30 years and 5-3/4% interest.

Owing to the attractiveness of C.E.F.A. financing, the competition for this source will be keen among Stanford projects as well as among California colleges and universities. Consequently, commercial loans must also be considered. Banks, savings and loan associations, insurance companies and retirement funds offer many opportunities. For planning purposes, and again, on the advice of the Director of Finance, commercial loans when referred to hereafter will be assumed to have terms of 25 years and 8% interest. Annual amortization payments on such loans would be 1.30 times the payments on C.E.F.A. bonds.

Internal borrowing of University funds is not seen as a valid long-term source. The policy of the Board of Trustees (June 14, 1974) is quite clear on this subject:

(a) Debt financing of proposed institutional facilities is approved as a justifiable source of funds where the proposed asset meets a University need which cannot be financed from gift funds or departmental reserves.

(b) Long-term financing by means of debt obligation shall be from sources external to the University.

(c) The use of University endowment and other investment funds invested in institutional facilities shall be limited to short-term interim financing until feasible to replace by long-term external financing . . . .

(d) Income-producing institutional assets that are financed by debt should have estimated income directly attributable to the proposed asset sufficient to pay the interest and amortize the debt over the term of the loan, which should not exceed the estimated useful life of the asset(s).

Interim construction financing or short-term renewable loans (as with current Endowment borrowing for Escondido IV) are possibilities, but only while awaiting the proper timing for long-term outside borrowing.

Financing Plan

In developing a financing plan for 850 new housing spaces, the Staff Study Group has attempted to look realistically at the ability of the

University to raise gift money, accessibility of loan sources, the ability of the housing system to shoulder additional debt service, inflationary factors, rates at competing schools, and timing.

Owing to the uncertainty of the gift level attainable and to the actual sources of loans, we will describe two financial tracks -- "optimal financing" and "minimal financing." The former is comprised of $8,500,000 in gifts (including the $1,500,000 Robert S. Moore Fund) and $16,534,000 of C.E.F.A. loans. The latter includes only $4,500,000 in gifts (including the Robert S. Moore Fund) and $20,534,000 in commercial loans. Following is the construction plan and the two-track financing plan:

Stage I: Construct three new Row Houses for 150 students at a cost of $3,600,000 for occupancy in the fall of 1976. "Optimal financing" consists of $2,000,000 of gifts and a loan of $1,600,000 through the California Educational Facilities Authority for thirty years, with interest at 5-3/4%. Hopefully, the $2,000,000 gift portion would consist entirely of new donations; however, if this amount has not been raised by completion of construction in 1976, the Robert Moore fund would be used to fill the gap between gifts in hand and $2,000,000.

"Minimal financing" consists of $1,500,000 of gifts (the Moore money already being in hand) and a commercial loan of $2,100,000 for twenty-five years at 8% interest.

Stage II-A: Construct 460 new spaces out of 700 spaces master-planned. Cost is estimated at $27,500 per space or a total of $12,650,000 and occupancy is planned for the fall of 1978. Optimal financing consists of $4,500,000 in gifts and a C.E.F.A. loan of $8,150,000 for thirty years at 5-3/4% interest. The gifts represent the balance of the $6,500,000 optimal gift target, including $1,500,000 of Robert S. Moore funds.

In the optimal case, new debt service of $583,000, if assumed in one year, would require an addition of $111 or 6.0% to room and board rates in 1978-79. In the minimal case, new debt service of $896,000, if assumed in one year would require an addition of $176 or 9.5% to room and board rates in 1978-79. Coupled with anticipated inflationary cost increases for that year of 6.2%, these incremental rate increases would amount to $226 or 12.2% in the optimal case and $291 or 15.6% in the minimal case. Such increases are clearly beyond the ability of students to absorb in one year. Therefore, our plan calls for gradual assumption of the debt over two years in the optimal case and three years in the minimal case. This phasing-in requires further borrowing for partial payment of the debt service during the years 1978-79 and 1979-80. Such borrowing is assumed to be at a commercial rate of interest, 8%, and would be repaid over five years (1981-86) in the optimal case and ten years (1982-92) in the minimal case. Detailed calculations are shown in Table 9.

Stage II-B: Construct the balance of 240 new spaces out of the 700 spaces master-planned earlier. Construction costs are assumed to have escalated beyond Stage II-A at a rate of 10% per year and would amount to $36,600 per space. The $8,784,000 project would be occupied in the fall of 1981.

Optimal financing consists of $2,000,000 in gifts and a C.E.F.A. loan of $6,784,000 for thirty years at 5-3/4% interest. Minimal financing consists of no gifts and a commercial loan of $8,784,000 for twenty-five years at 8% interest.

As in the case in Stage II-A, the additional debt service would be assumed by the residence system over a period of two years in the optimal case and three years in the minimal case.

Table 9: CALCULATIONS FOR DEBT SERVICE ON RESIDENCE EXPANSION OF 850 SPACES UNDER OPTIMAL AND MINIMAL FINANCING

	76-77	77-78	78-79	79-80	80-1	81-2	82-3	83-4	84-5	85-6
"Steady State" room and board rate	1750	1860	1975	2100	2230	2370	2515	2675	2830	3010
"Steady State" debt service	434,000	434,000	432,000	432,000	429,000	427,000	427,000	427,000	388,000	388,000
Debt Service/student (3565)	122	122	121	121	121	120	120	120	109	109

A.1. Stage I - Add 150 spaces @$24,000; $3,600,000. Optimal financing: gifts $2,000,000; loan $1,600,000 C.E.F.A.; estimated terms 5-3/4%, 30 yrs.

Incremental debt service	114,000	
Total debt service	548,000	
Basic debt service by 150 new students (122 X 150)	18,000	
Remaining incremental debt service	96,000	
Addition to room rate (4523 students)	21	(1.3%)

A.2. Stage I - Add 150 spaces @$24,000; $3,600,000. Minimal financing: gifts $1,500,000; loan $2,100,000 commercial source; estimated terms 8%, 25 yrs.

Incremental debt service	195,000	
Total debt service	629,000	
Basic debt service by 150 new students (122X150)	18,000	
Remaining incremental debt svc.	177,000	
Addition to room rate (4523 students)	39	(2.4%)

B.1. Stage II-A. Add 460 spaces @$27,500; $12,650,000. Optimal financing; gifts $4,500,000; loan $8,150,000 C.E.F.A.; estimated terms 5-3/4%, 30 yrs.

Incremental debt service	-	-	583,000							
Total debt service	548,000	548,000	1,131,000							
Basic debt svc by 360 new students (after reduction of 100 over-crowded spaces) (360X143)			51,000							
Remaining incremental debt service			532,000							
Addition to room rate if assumed in one year (4773 students)			111(6.0%)							
Addition if assumed over two years and 78-79 subsidy of $266,000 repaid over 5 years			56 (3.0%)	55(2.8%)	15 (.7%)					
Cumulative addition for Stage II-A			56	111	126	126	126	126	126	111

B.2. Stage II-A - Add 460 spaces @$27,500; $12,650,000. Minimal financing: gifts $3,000,000; loan $9,650,000 commercial source; estimated terms 8%.- 25 yrs.

Incremental debt service	-	-	896,000							
Total debt service	629,000	629,000	1,525,000							
Basic debt service by 360 new students (360X161)			58,000							
Remaining incremental debt svc.			838,000							
Addition to room rate, if assumed in one year (4773 students)			176 (9.5%)							
Addition if assumed over 3 yrs and subsidies for 78-79 and 79-80 repaid over 10 years			59 (3.2%)	59 (3.0%)	58 (2.8%)	30 (1.3%)				
Cumulative addition for Stage II-A			59	118	176	206	206	206	206	206

C.1. Stage II-B - Add 240 spaces @$36,600; $8,784,000. Optimal financing: gifts $2,000,000; loan $6,784,000 C.E.F.A., estimated terms 5-3/4%, 30 yrs.

Incremental debt service	-	-	-	-	-	485,000				
Total debt service	548,000	548,000	1,131,000	1,131,000	1,131,000	1,616,000				
Basic debt service by 240 new students (240X269)						65,000				
Remaining incremental debt service						420,000				
Addition to room rate if assumed in 1 yr (5013 students)						84 (3.8%)				
Addition if assumed over 2 years and subsidy of $210,000 for 81-82 repaid over 5 years						42 (1.9%)	42 (1.8%)	12 (.5%)		
Cumulative addition for Stage II-B						42	84	96	96	96

C.2. Stage II-B - Add 240 spaces @$36,600; $8,784,000. Minimal financing: no gifts, loan $8,784,000 commercial source; estimated terms 8%, 25 yrs.

Incremental debt service	-	-	-	-	-	815,000				
Total debt service	629,000	629,000	1,525,000	1,525,000	1,525,000	2,440,000				
Basic debt service by 240 new spaces (240X367)						88,000				
Remaining incremental debt service						727,000				
Addition to room rate if debt service assumed in one year (5013 students)						145 (6.6%)				
Addition, if assumed over 3 years & subsidy for 81-82 & 82-83 repaid over 10 yrs						38 (1.7%)	65(2.7%)	66(2.6%)		
Cumulative addition for Stage II-B						38	103	169	169	169

Table 10: PRO-FORMA "STEADY STATE" BUDGET FOR RESIDENCES AND FOOD SERVICE* - 1973-86

(Showing Increases Over Previous Years)

	73-74	74-5	75-6	76-7	77-8	78-9	79-80	80-1	81-2	82-3	83-4	84-5	85-6
Room and Board	1425	1535	1635	1750	1860	1975	2100	2230	2370	2515	2675	2830	3010
	6.0%	7.7%	6.5%	7.0%	6.3%	6.2%	6.3%	6.2%	6.3%	6.1%	6.4%	5.8%	6.3%
Income ($000's)	5449	5867	6249	6689	7109	7549	8027	8524	9059	9613	10225	10818	11499
	9.2%	7.7%	6.5%	7.0%	6.3%	6.2%	6.3%	6.2%	6.3%	6.1%	6.4%	5.8%	6.3%
Expense ($000's)	2051	2195	2371	2537	2715	2905	3108	3325	3558	3807	4074	4359	4664
Salaries and Benefits	6.0%	7.0%	8.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
Food	1195	1315	1433	1548	1641	1739	1843	1954	2072	2196	2328	2468	2616
	11%	10%	9.0%	8.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Utilities	320	360	403	443	488	527	569	615	651	690	732	776	822
	6.0%	12%	12%	10%	10%	8.0%	8.0%	8.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Supplies & Equipment	221	234	247	259	269	280	291	303	315	328	341	355	369
	6.0%	6.0%	5½%	5.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Repair & Maintenance	247	265	284	301	319	338	359	380	403	427	453	480	509
	3.0%	7.0%	7.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Services (Fire, Police,	458	629	679	727	778	832	890	953	1019	1091	1167	1249	1336
Acctg, Purchasing, Pers.	5.0%	37%	8.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
Ins, Mgmt)													
Major Repair Allocation	350	375	405	433	464	496	531	568	608	650	696	745	797
	-0-	7.0%	8.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
Debt Service	458	434	434	434	434	432	432	429	427	427	427	388	388
	(4.9%)	(5.27%)	-0-	-0-	-0-	(.5%)	-0-	(.7%)	(.5%)	-0-	-0-	(9.1%)	-0-
Total Expense	5300	5806	6256	6682	7108	7549	8023	8527	9052	9616	10218	10820	11501
	7.3%	9.5%	7.8%	6.8%	6.4%	6.2%	6.3%	6.3%	6.2%	6.2%	6.3%	5.9%	6.3%
Net (000's)	149	61	(7)	7	1	-0-	4	(3)	7	(3)	7	(2)	(2)

*Includes residence halls and 12 University-owned Row Houses. Assumes no new construction.

Affordability

The test of any financing plan for a building, a product, or a service is whether the ultimate customers are willing and able to pay for it. The beginning of our discussion of affordability will examine the impact of inflationary pressures upon the residence system in a "steady state" and then we will consider the effects of proposed changes.

Steady State Rates - By "steady state" we mean the continuation of the present level of services and the continuation of 100 "overcrowded" spaces in Roble, Lagunita Court, and Branner. Table 10 shows the projected "steady state" budget and the room and board rates necessary for a balanced budget through 1986.

To achieve this "steady state", rate increases averaging 6.3% will be required from 1975-76 through 1985-86. The projected "steady state" rates and percentage increases are shown in Table 11.

Table 11: STANFORD "STEADY STATE" ROOM AND BOARD RATES

Year	Rate*	Increase Over Previous Year
1974-75	$1535	7.7%
1975-76	1635	6.5%
1976-77	1750	7.0%
1977-78	1860	6.3%
1978-79	1975	6.2%
1979-80	2100	6.3%
1980-81	2230	6.2%
1981-82	2370	6.3%
1982-83	2515	6.1%
1983-84	2675	6.4%
1984-85	2830	5.8%**
1985-86	3010	6.3%

* Room and full board contract
**Final debt service payment of $39,400 for Lagunita Court is made in 1984

Residence Staff Expense Transfer - One of the components of the Stanford residence program is the residence staff, including resident fellows (faculty), administrative staff, and student staff. General funds of the University

support over half of this expense at the present time. For 1974-75, $312,000 of such support applies to approximately 4,400 undergraduate students living in houses assigned through the annual draw process or assigned to freshmen. With the prospect of an operating deficit of $1,500,000 for the University for 1973-74 and with the probability of a similar University deficit for 1974-75, it is very likely that the residence system will soon have to shoulder the cost of the residential education program. Table 12 shows the effect upon room and board rates of transferring this cost from the general funds budget of the University to the residence system. Assuming one-third of the cost in 1975-76, two-thirds in 1976-77 and 100% in 1977-78 would cause a cumulative increase of 4.7% or $83 per student per year in the room and board rate. This is an increase above the "steady state" figures and it is considered by the Staff Study Group to be a necessary increase to continue the basic vitality of the Stanford residence system. Therefore, in computing room and board rates for a building expansion program, residential education costs are assumed to have been absorbed by the residence system in accordance with the schedule shown in Table 12.

Table 12: EFFECT ON ROOM AND BOARD RATE OF TRANSFERRING RESIDENTIAL EDUCATION FIELD EXPENSE TO RESIDENTS

Year	Residential Education Field Expense for Undergraduates in Draw	Share Transferred to Residents	Amount Transferred to Residents	Cumulative Increase in Rm & Bd Rate	
74-75	$312,000	-	-	-	-
75-76	331,000	33.3%	$110,000	$25	1.6%
76-77	356,000	66.7%	237,000	52	3.2%
77-78	378,000	100%	378,000	83	4.7%
78-79	462,000	100%	462,000	97	5.2%
79-80	490,000	100%	490,000	103	5.2%
80-81	519,000	100%	519,000	109	5.2%
81-82	565,000	100%	565,000	113	4.9%
82-83	599,000	100%	599,000	120	5.1%
83-84	635,000	100%	635,000	127	5.0%
84-85	673,000	100%	673,000	134	5.0%
85-86	713,000	100%	713,000	142	5.0%

Table 13: VARIABLES TO APPLY TO STANFORD "STEADY STATE" ROOM AND BOARD RATES

Variable	74-75	75-6	76-7[1]	77-8	78-9[2]	79-80	80-1	81-2[3]	82-3	83-4	84-5	85-6
Additional debt service with optimal financing	-	-	$21	$21	$77	$132	$147	$189	$231	$243	$243	$243
Additional debt service with minimal financing	-	-	39	39	98	157	215	283	348	414	414	414
Transfer residential education expense	-	25	52	83	97	103	109	113	120	127	134	142

"Steady State" Room & Board Rate	74-75	75-6	76-7	77-8	78-9	79-80	80-1	81-2	82-3	83-4	84-5	85-6
	$1535	$1635	$1750	$1860	$1975	$2100	$2230	$2370	$2515	$2675	$2830	$3010

[1] Stage I occupied

[2] Stage II-A occupied

[3] Stage II-B occupied

Construction - The effect upon room and board rates of an 850 space expansion of the residence system is shown in Tables 13 and 14. The optimal financing track would generate increases totalling $243 per student per year, with the largest single increase occurring in 1978-79, $56 or 3.0% of the previous year's room and board rate. Coupled with normal inflation and residential education, the overall increase would be 9.4% for 1978-79. This track produces a rate of $3045 by the year 1983-84, an average increase of 7.9% per year from 1975 to 1984. This includes residential education costs and is only 1.5% above the steady state rate of increase.

Total debt service increases of $414 occur in the minimal financing track, with a largest single increase of $68 or 3.0% in 1981-82. An overall increase of 10.9% would occur in that year, including inflationary effects and transfer of residential education expenses. The average increase for the minimal track is 8.6%, 2.2% over the steady state rate of increase.

Table 14: STANFORD ROOM AND BOARD RATE PROJECTIONS, 1974-84

1 Year	2 Steady State	3 Increase Over Prior Year	4 Residential Education Added To Col. 2	5 Increase Over Prior Year	6 Optimal Financing Added To Col. 4	7 Increase Over Prior Year	8 Minimal Financing Added To Col. 4	9 Increase Over Prior Year
1974-75	$1535	-	$1535	-	$1535	-	$1535	-
1975-76	1635	6.5%	1660	8.1%	1660	8.1%	1660	8.1%
1976-77	1750	7.0%	1802	8.6%	1823	9.8%	1841	10.9%
1977-78	1860	6.3%	1943	7.8%	1964	7.7%	1982	7.7%
1978-79	1975	6.2%	2072	6.6%	2149	9.4%	2170	9.5%
1979-80	2100	6.3%	2203	6.3%	2335	8.7%	2360	8.8%
1980-81	2230	6.2%	2339	6.2%	2486	6.5%	2554	8.2%
1981-82	2370	6.3%	2483	6.2%	2672	7.5%	2766	8.3%
1982-83	2515	6.1%	2635	6.1%	2866	7.3%	2983	7.8%
1983-84	2675	6.4%	2802	6.3%	3045	6.2%	3216	7.8%
Average increase over prior year		6.4%		6.9%		7.9%		8.6%

We feel strongly that a construction program must move ahead without delay and with the full intent of adding 850 spaces. We believe that the 7.9% average annual increase in room and board rates required by the optimal track is both reasonable and affordable. The minimal financing track, with an average annual increase of 8.6%, is probably on the outer boundary of affordability.

In considering affordability and willingness on the part of students to pay higher room and board rates, it is essential to reflect upon the impressive demand statistics set forth earlier in the study. Were it not for the obviously strong demand, we do not believe that price increases of 7.9% or even 8.6% would have a noticeable effect upon future demand for on-campus housing.

We know, from a study of admittees to the Stanford Class of 1976 who did not enroll, that finances were a major consideration for only 22.5% of the admittees who enrolled elsewhere.* Clearly, in the case of tuition, admittees are much more concerned about the quality of education than its cost. The analogy can be extended logically to room and board costs and the residential university. The evidence is overpowering (see Preface and the discussion on housing demand) that students enter Stanford and remain at Stanford not only because of its academic program but also because of its residential nature.

Financial Implications of Retaining Manzanita Park - It is timely to discuss the positive financial benefits of retaining Manzanita Park for another seven years, as recommended earlier (page 27). The construction loan for the Park will be paid off in 1974-75, the sixth year of operation.

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*Freshman Admissions and Financial Aid at Stanford, 1972-73, Academic Planning Office, June 1973.

The accumulated operating deficit will be erased during the year 1976-77, and approximately $168,000 of operating surplus will still be available for other uses within the residence system. As seen in Table 15, this surplus could be applied to service the debt on new construction and would have the effect of reducing room and board rates (and trailer rates) by $47 in 1978-79. This is the year in which rates would increase sharply, owing to the completion and occupancy of Stage II-A. For as long as the Park is retained, even with 3-person occupancy, it would help to reduce rates, including trailer rates, by over $50 per student per year. Applied to the "minimal financing"

Table 15: REDUCTION IN ROOM AND BOARD RATES THROUGH USE OF MANZANITA PARK ANNUAL OPERATING SURPLUS

Year	Surplus	Reduction for 4523 Students;[1] Stage I - 150 New Spaces	Reduction for 4773 Students;[2] Stage II-A - 460 New Spaces	Reduction for 5013 Students;[3] Stage II-B - 240 New Spaces
1976-77	$168,000	$37	-	-
1977-78	280,000	62	-	-
1978-79	225,000	-	$47	-
1979-80	238,000	-	50	-
1980-81	252,000	-	53	-
1981-82	268,000	-	-	$53
1982-83	284,000	-	-	57
1983-84	301,000	-	-	60
1984-85	319,000	-	-	64
1985-86	338,000	-	-	67

[1] 4523 includes spaces for all freshmen, transfers and other undergraduates participating in the draw process. Trailer occupancy: 4 persons.

[2] 4523 plus 460 new spaces, less reduction of all overcrowding (100), less reduction of 110 spaces in Manzanita Park. Trailer occupancy: 3 persons.

[3] 4773 plus 240 new spaces. Trailer occupancy: 3 persons.

rates, Column 8 of Table 14, the Manzanita Park surplus would drop the average increase for the period 1974 to 1984 from 8.6% to 8.3%.

Stanford's Competitive Position

Stanford competes vigorously for incoming freshmen with the leading colleges and universities in the country. These include Harvard, M.I.T., Yale, Dartmouth, Princeton, the Claremont Colleges, U.C. - Berkeley, U.C. - Davis, and others. Tables 16, 17, and 18 show how Stanford's room and board rates compare with its competition. The data, projected into 1985-86, show three Stanford possibilities -- steady state, optimal financing for new construction (including residential education expense) and minimal financing for new construction (also including residential education expense).

If the construction and financing plans are followed as described in this chapter, Stanford's room and board rates will gradually surpass those of Claremont, Princeton, Dartmouth and Yale. With the completion of the building program financing schedule in 1983-84, Stanford's rates would level off and retain their relative position below M.I.T. but above Yale.

Lest the projection of Stanford's rates cause undue concern among readers, we shall point to a number of factors which can brighten the picture considerably. These include:

1) Construction Costs - The figures used here are furnished by the University Planning Office and represent the conservative edge of full project costs. These could be improved, perhaps dramatically, by new construction techniques, by a decline in the sharp rate of increase for construction costs, or by involving developers in a design competition.

2) Inflation - The projections reflected in the steady state budget (Table 10) and the various Tables in this chapter are thought to be conservative. We believe that deviations are more likely to be downward than upward.

3) Competitive Schools - Projections for other schools make the con-

University	74-5	75-6	76-7	77-8	78-9	79-80	80-1	81-2	82-3	83-4	84-5	85-6
Harvard	1950	2100	2245	2385	2535	2695	2865	3040	3230	3430	3645	3875
M.I.T.	1845	1990	2125	2260	2400	2550	2710	2875	3055	3245	3450	3665
STANFORD with minimal financing for 850-space expansion**	1535	1660	1841	1982	2170	2360	2554	2766	2983	3216	3378	3566
STANFORD with optimal financing for 850-space expansion**	1535	1660	1823	1964	2149	2335	2486	2672	2866	3045	3207	3395
Yale	1700	1830	1955	2080	2210	2350	2495	2650	2815	2990	3175	3375
Dartmouth	1640	1765	1885	2010	2130	2265	2410	2555	2715	2885	3065	3260
Princeton	1620	1745	1865	1985	2105	2240	2380	2525	2685	2850	3030	3220
Claremont Colleges	1600	1725	1840	1960	2080	2210	2350	2495	2650	2815	2990	3180
STANFORD "Steady State"	1535	1635	1750	1860	1975	2100	2230	2370	2515	2675	2830	3010
U.C. - Berkeley	1425	1535	1640	1745	1855	1970	2095	2220	2360	2510	2665	2835
U.C. - Santa Cruz	1385	1495	1595	1700	1805	1915	2035	2160	2295	2440	2590	2755
U.C. - Davis	1350	1455	1555	1655	1755	1865	1980	2105	2235	2375	2525	2680

*Rates for STANFORD "Steady State" and other schools projected at Stanford's estimated inflationary factors, averaging 6.5%.

**Projected to show additions in 1976-77 (150), 1978-79 (460) and 1981-82 (240). Rates include Residential Educational field expense.

Table 17: ROOM AND BOARD RATE PROJECTIONS

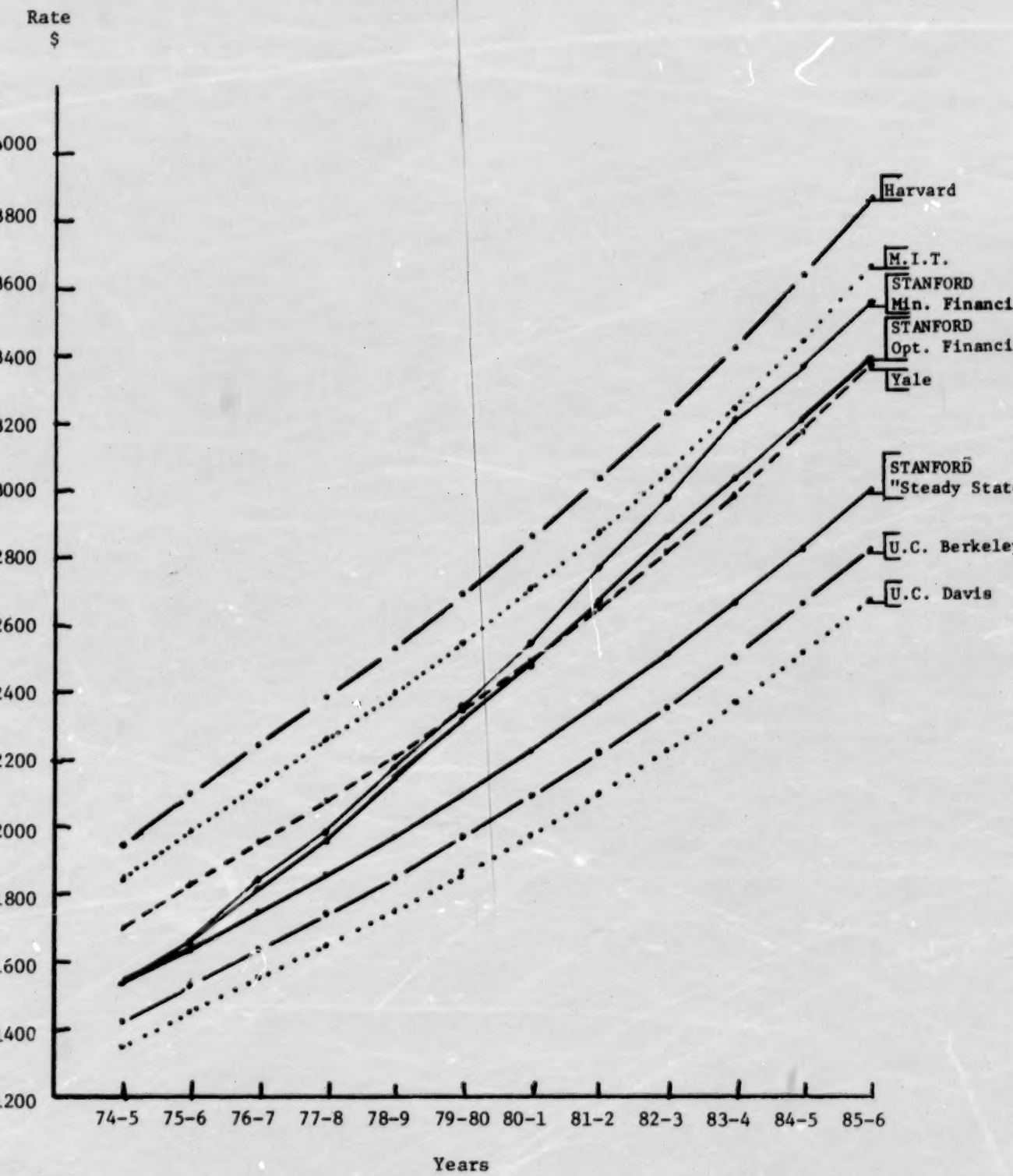
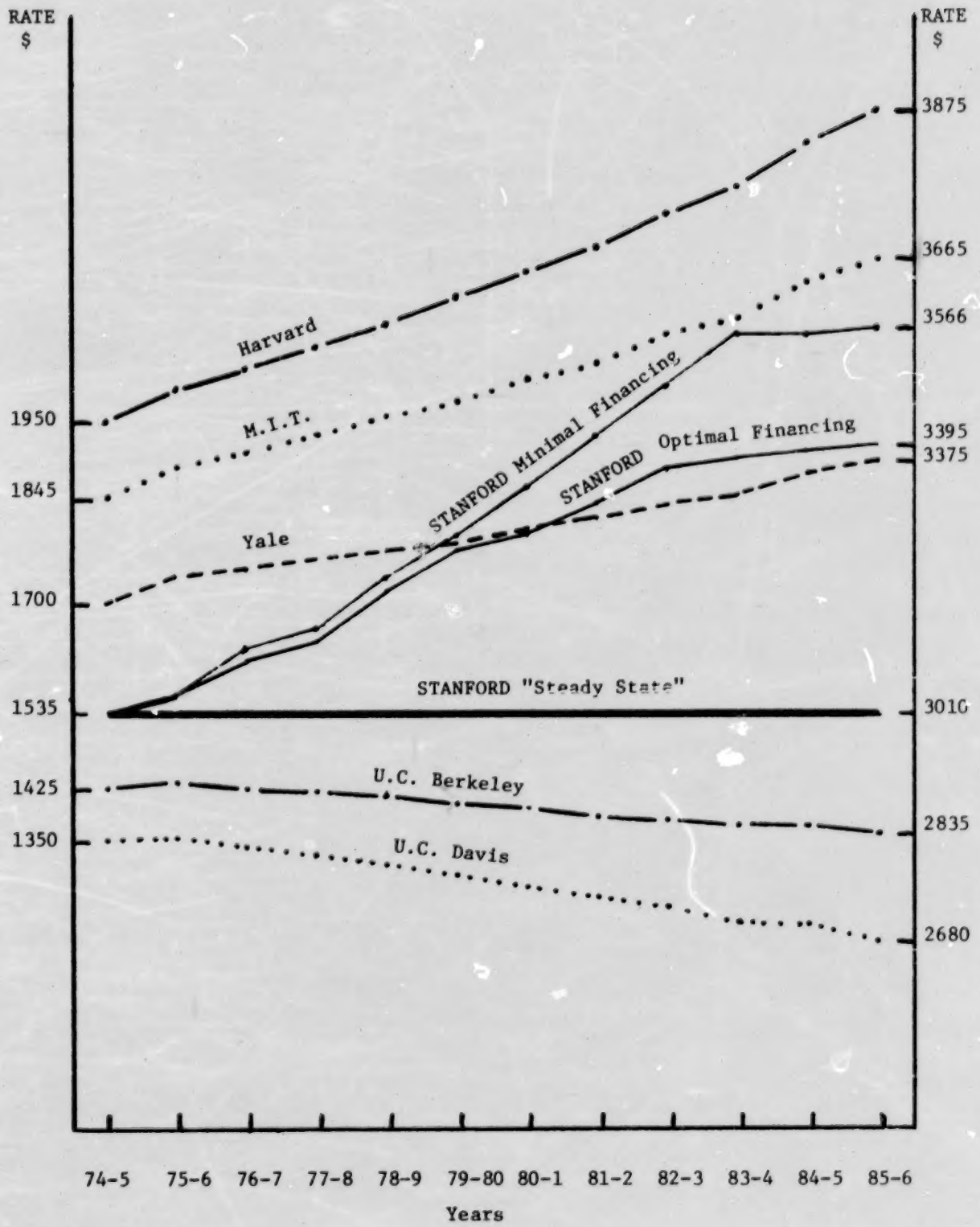


Table 18: ROOM AND BOARD RATE PROJECTIONS
(Showing Deviations from Stanford "Steady State")



servative assumption (in the absence of specific information) that those schools have no plans for construction of residences and hence no new debt service additions. We also assume no unusual cost allocation changes at those schools, such as the very large allocations of police, fire, and personnel department charges against Stanford residences for 1974-75. In fact, Stanford assigns far more service costs (fire, police, personnel, accounting, purchasing, insurance) than any other school with whom we compare ourselves. Therefore, it is logical to assume that those schools will be forced to move in the direction of full costs, since their general funds budgets are under the same pressure faced by Stanford.

4) Gifts - Any increase in gifts over the levels cited under the optimal and minimal cases will have the effect of lowering rates. One very large gift, on the order of several million dollars, could have a substantial positive impact.

5) Loans - The most favorable debt financing known to us at this time is through the California Educational Facilities Authority. The reactivation of Federal loans in the 3% range would have a significant positive influence on debt service and on rates, if we were to secure such favorable financing.

6) Spreading the Debt - The analysis of this chapter assumes that new debt would be spread over a pool of approximately 4500 undergraduate students (Stage I), increasing to 5000 students (Stage II-B). This pool includes the residence halls, Manzanita Park, Mirrielees, and all other University-owned houses included in the draw. The debt service per student (and hence the room and board rate) could be lowered by including in the pool single graduates (approximately 700) and residents of University-owned houses filled by the "rush" process (approximately 450). A rationale can be drawn for creating one large debt service pool for all housing units, including selective houses and married student apartments; this is a complex issue, but it must be faced

squarely if equity is to be achieved among the various types of on-campus housing.

Conclusions

We conclude from the preceding discussion and analysis the following:

1) An expansion of 850 spaces, at a cost of about $25,000,000 is financially feasible.

2) The optimal financing plan ($8,500,000 in gifts and $16,534,000 in loans) can be achieved with average rate increases of 7.9% over the next ten years. This includes transfer of residential education expense from general fund support starting in 1975-76. The minimal financial plan requires average increases of 8.6% over the next decade.

3) Housing demand is sufficiently strong that rate increases averaging 7.9% or 8.6% for the next ten years will not have a noticeable impact upon demand.

4) Stanford will lose some of its competitive advantage over other schools in room and board rates by undertaking a building program. In some cases, the existing disadvantage will be widened.

5) Manzanita Park surpluses after 1976 can be used to reduce room and board rates by about $50/year.

6) The projection of Stanford's construction costs, operating costs, and room and board rates are conservative, and favorable reductions are possible.

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Michael Korff

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REPORT OF THE LOW COST HOUSING COMMITTEE (1969; Robert H. Moulton, Jr., Chairman). In analyzing the local housing shortage existing at the time, the Moulton Committee included a section on the "Effects of Local Housing Shortage Upon Stanford." With regard to Stanford students, the Committee pointed out that they were ". . . competing actively with minority and low income groups for the limited lower cost housing that is available" and concluded that "housing crises of increasing severity have occurred each [A]utumn." (p.9)

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STANFORD DAYS, an undated brochure distributed to potential freshmen and other entering students dating approximately from 1933. Note especially the section entitled, "A Strictly Residence University."

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Chairman). Mr. Mayhew's committee reviewed the report of Ms. Packer's committee and generally agreed that living and learning are central to the life of the University and that the residential Houses are an integral part of the educating mechanism of this University.

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"What's the housing problem and where is it? COLLEGE MANAGEMENT, March 1973. This article discusses theories about why the major private universities do not have problems filling housing spaces, while some of the smaller, less prestigious schools do. Basically, the major schools provide better facilities, require on-campus residency, and have a diverse housing system capable of meeting the differing needs of different constituencies.

ON-CAMPUS SINGLE-STUDENT UNDERGRADUATE ENROLLMENT, 1963-1974[1]

Year	On-Campus Single Student Undergraduate Enrollment	Rated/Budgeted Capacity[2] Undergraduate Housing	Residences in Housing System by Year[3]
63-64	5168E	4365 (84%)	3-8, 10-11, 13, 15-19, 21-37, 41-42, 45, 47-48, 53, 56, 61
64-65	5231E	4140 (81%)	3-4, 6-8, 10-11, 13, 15-19, 21-33, 35-37, 41-42, 45, 47, 54, 61
65-66	5277E	4069 (77%)	3-4, 6-8, 10-11, 13, 15-19, 21-33, 35-37, 41-42, 45, 47, 55, 61
66-67	5266	4059 (77%)	3-8, 10-11, 13, 15-19, 21-33, 36-37, 39-42, 45, 47, 58
67-68	5273	4059 (77%)	3-8, 10-11, 13, 15-19, 21-33, 36-37, 39-42, 45, 47, 58
68-69	5429	4159 (77%)	3-4, 6-7, 11, 13, 15-19, 21-33, 36, 41-45, 47, 49-51, 58
69-70	5573	4619 (83%)	3-4, 6-7, 11, 13, 15-19, 21-33, 36, 41-45, 47, 49-51, 58-59
70-71	5549	4643 (78%)	3-4, 6-7, 11-13, 15-19, 21-33, 36, 41-45, 47, 49-51, 58-59
71-72	5956E	4643 (78%)	3-4, 6-7, 11-13, 15-19, 21-33, 36, 41-45, 47, 49-51, 58-59
72-73	5987	4736 (79%)	3-4, 6-7, 11-13, 15-19, 21-33, 36, 41-45, 47, 49-51, 60, 62
73-74	6135	4746[4] (77%)	3-4, 5-7, 12-13, 15-19, 21-33, 36, 41-45, 47, 49-51, 60, 63

[1] Figures for housing controlled by the housing office are taken from Housing Occupancy Reports for October of the years indicated and added to estimated maximum occupancy for fraternities to yield the figures given; Overseas Campuses have been subtracted from enrollment figures.

[2] Assumes full occupancy based on the rated capacities used in the 1972-73 academic year.

[3] See next page for definition of this column.

[4] This figure includes 14 newly created spaces.

Residences in Undergraduate Housing System by Year

In order to make the figures comparable, the Rated Occupancy level for 1972-73 (November) was used for all residences going back to 1963-64; this figure is in sharp disagreement with the rated or budgeted figure for many of the houses at various times in the past (cf.: Lagunita Court).

For all of the years listed, the following student residences were in use and the rated occupancy levels indicated were used in calculating the capacity:

Toyon Hall	203 beds	Lagunita Court	296 beds
Wilbur Houses	734 beds	Roble Hall	250 beds
Stern Houses	608 beds	Branner Hall	175 beds
Flo. Moore Houses	357 beds	TOTAL	2,623 beds

These, then, are the base-line residences used in calculating the capacity of the undergraduate housing system.

The housing system, however, includes more than just these dormitories. It has also included various residences no longer in use (Stanford Village Dormitories, Union Residence, etc.), the Row Houses coming under the University's control, as well as fraternities. In calculating the capacity of the housing system we have relied on the number of beds available for undergraduates on campus. Thus we have considered all forms of housing as part of a "housing pool."

To gather figures for this housing pool we have made a number of assumptions which affect the capacities listed. First of all, to obtain approximate figures for the number of beds available in fraternities we have relied on a 1957 survey of all residences undertaken by the University Planning Office (now known as Facilities Planning) at the direction of the Board of Trustees. For those houses still in use, we have omitted sleeping porch capacities where no longer used. We have held these figures constant throughout the 1960's. In addition, we have assumed that the Row Houses were occupied exclusively by undergraduates and have assumed that Manzanita Park was occupied by undergraduates. Finally, we have not considered married undergraduates living in Stanford Village or Escondido Village.

To facilitate the completion of this survey, we have listed all addresses where students have lived during the past decade and have listed the various residences which have existed in/on those addresses. The following, to the best of our knowledge, is at least suggestive of the housing pool existing at Stanford during the past decade. The residences are numbered in order that we could indicate under the column headed "Residences in Housing System by Year" the buildings being included in the total. It should be remembered that the base-line residences listed above are included in all figures.

LASUEN STREET HOUSES

1. 521 Lasuen (44 beds) - (61-62): Sigma Alpha Epsilon
2. 538 Lasuen (40 beds) - (61-62): Phi Delta Theta
3. 543 Lasuen (33 beds) - (61-74): Lathrop House
4. 544 Lasuen (37 beds) - (61-74): Storey House
5. 549 Lasuen (22 beds) - (63-64): Manzanita Lodge; (66-68): Alpha Sigma Phi
   (38 beds) - (73-74): Columbae Community (Stillman House was moved to this site from 569 Lasuen)
6. 550 Lasuen (48 beds) - (61-74): Sigma Chi/Sigma Chi Omega
7. 557 Lasuen (35 beds) - (61-74): Beta Theta Pi
8. 558 Lasuen (50 beds) - (61-62): Kappa Sigma; (62-68): Phi Gamma Delta
9. 562 Lasuen (43 beds) - (61-63): Kappa Alpha
10. 566 Lasuen (29 beds) - (61-68): Delta Kappa Epsilon
11. 569 Lasuen (35 beds) - (61-73): Stillman House/Grove*
12. 572 Lasuen (24 beds) - (70-72): Chi Psi; (72-73): Lasuen House; (73-74): Grove House
13. 573 Lasuen (39 beds) - (61-74): Hurlburt House/Grove
14. 579 Lasuen (29 beds) - (61-63): Alpha Delta Phi

MAYFIELD STREET HOUSES

15. 353 Mayfield (51 beds) - (63-64): Zeta Psi; (64-66): Alpha Sigma Phi; (66-74): Zeta Psi
16. 375 Mayfield (51 beds) - (63-74): Alpha Delta Phi
17. 521 Mayfield (51 beds) - (62-74): Sigma Alpha Epsilon
18. 535 Mayfield (51 beds) - (62-74): Kappa Sigma
19. 564 Mayfield (25 beds) - (61-72): Phi Sigma Kappa; (72-74): Phi Sig House
20. 584 Mayfield (40 beds) - (61-62): Theta Delta Chi
21. 586 Mayfield (36 beds) - (61-70): Delta Chi; (70-71): Transfer House; (71-74): Kairos
22. 592 Mayfield (34 beds) - (61-68): Alpha Tau Omicron; (68-71): Mayfield House; (71-74): Delta Kappa Epsilon
23. 610 Mayfield (39 beds) - (61-74): Guthrie House
24. 620 Mayfield (34 beds) - (61-74): Jordan House
25. 634 Mayfield (31 beds) - (61-74): Durand House
26. 650 Mayfield (34 beds) - (61-74): not occupied.

SAN JUAN HOUSES

27. 550 San Juan (37 beds) - (61-74): Phi Kappa Psi
28. 650 San Juan (45 beds) - (61-73): Delta Tau Delta; (73-74): The Delt House
29. 664 San Juan (40 beds) - (61-72): Sigma Nu/Beta Chi; (72-74): Synergy

LOMITA COURT HOUSES

30. 658 Lomita (51 beds) - (63-74): Alpha Kappa Lambda/Lambda Nu
31. 664 Lomita (51 beds) - (63-74): Kappa Alpha
32. 675 Lomita (51 beds) - (62-74): Theta Delta Chi
33. 680 Lomita (51 beds) - (62-74): Phi Delta Theta

*Moved in 1973 to 549 Lasuen.

SALVATIERRA HOUSES

34. 528 Salvatierra (7 beds) - (61-64): Chinese Club
35. 534 Salvatierra (40 beds) - (61-66): Alpha Sigma Phi
36. 540 Salvatierra (38 beds) - (61-74): Delta Upsilon
37. 560 Salvatierra (40 beds) - (61-68): Chi Psi
38. 568 Salvatierra (35 beds) - (61-63): Alpha Kappa Lambda
39. 570 Salvatierra (trailers)- (66-68): Alpha Sigma Phi
40. 575 Salvatierra (assumed capacity of 570 and 575 Salvatierra is 14); (66-68): Alpha Sigma Phi

OTHER HOUSES

41. 576 Alvarado (26 beds) - (61-74): Theta Chi
42. 592 Alvarado (26 beds) - (61-72): Phi Kappa Sigma; (72-74): Hammarskjold
43. 702 Bowdoin (51 beds) - (68-74): Alpha Tau Omicron/ATO
44. 710 Bowdoin (51 beds) - (68-74): Phi Gamma Delta/Zeta Alpha Phi
45. 717 Dolores (41 beds) - (61-74): Theta Xi
46. 583 Lagunita (35 beds) - (61-63): Zeta Psi
47. 713 Santa Ynez (34 beds) - (61-74): Roth House
48. 714 Santa Ynez (21 beds) - (61-64): Tamarack Lodge
49. 517 Cowell (51 beds) - (68-70): Chi Psi; (70-73): Columbae/Nonviolent house; (73-74): Whitman House
50. 539 Cowell (51 beds) - (68-71): Delta Kappa Epsilon; (71-74): Ecology/ Terra House
51. 585 Cowell (51 beds) - (68-74): Alpha Sigma Phi

MISCELLANEOUS

52. Stanford Village Dormitories (61-62): 130 beds
53. Stanford Village Dormitories (62-64): 290 beds
54. Stanford Village Dormitories (64-65): 226 beds
55. Stanford Village Dormitories (65-66): 55 beds
56. Huston House (62-64): 11 beds
57. Mariposa House (62-63): 23 beds
58. Hoskins House (66-72): 126 beds
59. Manzanita Park (69-72): 460 beds (some are grad spaces)
60. Manzanita Park (72-74): 456 beds
61. Union Residence (61-66): 77 beds
62. Mirrielees (72-73): 223 beds
63. Mirrielees (73-74): 230 beds

HOUSES LEAVING AND ENTERING THE UNDERGRADUATE HOUSING POOL AT STANFORD BY YEAR

Year	Leaving	Entering
63-64	Kappa Alpha (old), Alpha Delta Phi (old), Alpha Kappa Lambda (old), Zeta Psi (old), Mariposa House	Manzanita Lodge, Zeta Psi (new), Alpha Delta Phi (new), Alpha Kappa Lambda (new), Kappa Alpha (new)
64-65	Manzanita Lodge, Chinese Club, Tammarack Lodge, Huston House, decrease in capacity in S.V.	
65-66	Further decrease in capacity in S.V.	
66-67	Alpha Sigma Phi (old), Union Residence	Alpha Sigma Phi (trailers, etc.), Manzanita Lodge (Alpha Sigma Phi), Hoskins House
67-68	----	
68-69	Manzanita Lodge (Alpha Sigma Phi), Phi Gamma Delta, Delta Kappa Epsilon (old), Chi Psi (old), Alpha Sigma Phi (trailers, etc.)	Alpha Tau Omicron, Phi Gamma Delta, (ZAP), Chi Psi, DKE (new), Alpha Sigma Phi (new)
69-70	----	Manzanita Park (460 occupancy)
70-71	----	Chi Psi Duplex (Lasuen House)
71-72	----	----
72-73	Hoskins House, decrease in number of MP trailers	Mirrielees House
73-74	(Grove House/Stillman moved)	Slight increase in undergrad spaces in Mirrielees House

Appendix II
FACTORS OUTSIDE STANFORD

Introduction

An earlier section noted that because of the financial significance to the University and the student body of the assumption of a 25-30 year mortgage which an addition of housing will almost certainly require, some care had been taken to establish a documentable case solid enough to proceed with the planning and construction of any housing. The Study Group feels that the conservative approach to measuring housing demand and the statements of financial feasibility--fund raising capacity, money market access, and the ability of room and board rates to absorb additional burden--meet that test.

However, there are a series of other questions--labeled here as Factors Outside Stanford--which anyone making a judgment concerning an addition of student housing should ask. The questions, as a group, probe whether factors outside the University can change enough to affect future on-campus housing demand--particularly in a negative direction. Specifically:

-Will there be more or less community housing available for Stanford students?

-What will the cost of such housing be?

It would be misleading to suggest that these questions lend themselves to a simple conclusive analysis. That the subject matter is outside Stanford says also that the solutions are largely outside the University's control. For example, the cost of Palo Alto student rental housing could have been affected by a rent control law recently voted down in the community. Resolutions on these matters are and will be products of many interest group

confrontations and will be formulated, if at all, over a long period of time. Consequently, an analysis of the above questions must by their own nature only permit a presentation of relevent historical and current data and modest extrapolations and conclusions from that data; beyond that point a discussion of an issue with numerous uncontrollable variables degenerates into the trading of ill-informed supposition. The Study Group feels some responsibility to proceed through the first two steps, but not into the third.

Findings

Given the limitations of analysis discussed above but the responsibility to make a judgment, the Study Group finds no evidence that the demand for on-campus housing will reduce as a result of the development of factors external to the University; if anything, the trends support the reverse case--that factors external to Stanford will on balance cause even greater demand for on-campus housing.

Will there be more or less community housing available for Stanford students?

In both San Mateo and Santa Clara counties there is a wide range from community to community both in the number of apartment units currently available and in the possibility for future construction of such units. However, in those areas where Stanford students choose to live, the number of apartment units has stabilized in a market of increasing non-student demand and the probability of future apartment construction continues to decrease.

Where do off-campus students live?

Nearly 80% of students living off the campus live in the band of cities immediately circling Stanford (See Table II-A). Almost 60% live in Palo Alto. It is particularly notable that only 8% live in Mountain View, a city which has a large number of apartments in a modest price range and in a reasonable commute distance from Stanford.

Table II-A: UNDERGRADUATE OFF-CAMPUS RESIDENCE BY ZIP CODE AREA

ZIP Code Area	Number of UG Living in ZIP Code Area	% of Total Sample Living in this ZIP Code Area
Palo Alto* - 94300-94306	693	59.8%
Menlo Park-Atherton-Portola Valley - 94025	228	19.7%
Mountain View - 94040-94043	89	7.6%
Los Altos-Los Altos Hills - 94022	41	3.5%
Miscellaneous	106	9.4%
Total	1,157	100.0%

*Excludes Stanford Branch

What is the general availability of local housing?

After a time of fluctuation caused by aerospace cutbacks and spurts of overbuilding, vacancy rates in Santa Clara county have been decreasing for the last three years. However, Palo Alto -- where 60% of off-campus undergraduates live -- has enjoyed an extremely low vacancy rate for years (see Table II-B). Of the 1,543 units surveyed during April 1973, in the Palo Alto area, only 20 were vacant.

Table II-B: SANTA CLARA COUNTY AND PALO ALTO APARTMENT VACANCY RATES

Date of Survey	Santa Clara County	City of Palo Alto
January 1972	13.0%	-
June 1972	7.9%	1.3%
April 1973	6.4%	1.3%

Data for this Table is taken from the June 1972 and April 1973 editions of APARTMENT SURVEY FOR SANTA CLARA COUNTY, Institute for Business and Economic Research, School of Business, California State University, San Jose

In analyzing the limited supply of moderately priced housing in the Mid-Peninsula, the Moulton Committee Report (1969) included a section on the "Effects of [the] Local Housing Shortage Upon Stanford." The Committee pointed out that Stanford students were ". . . competing actively with minority and low income groups for the limited lower cost housing that is available" and concluded that "housing crises of increasing severity have occurred each autumn."

What factors will influence the future availability of area housing for Stanford students?

1. The population of Santa Clara County is expected to increase 1½ times as fast as the rest of the state in the next 25 years. This 68.2% increase will expand the County's population from its current 1,073,200 to 1,804.900.

2. Lower density levels for Palo Alto will limit new residential building in the year ahead. The city is currently conducting a Comprehensive Plan Study which is investigating, among other things, many options with regard to housing, especially the social and environmental ecological effects of building Palo Alto up to the density levels currently permitted by zoning laws. Lower density levels are probable.

3. Conversion of apartments to condominium units will limit the availability of rental units. The Palo Alto Condominium Conversion Study and the accompanying six-month moratorium on the conversion of apartments to condominium units reflects a concern over the decreasing availability of rental units. In 1973, building permits were issued for the construction of 135 apartment units in Palo Alto while 107 apartments were converted to condominium units -- a net increase in apartment supply of only 28 apartments.

4. In the past, some students have joined together to rent large houses in the Palo Alto area. On November 13, 1973, a three-judge U.S. Circuit Court of Appeals upheld Palo Alto's Municipal Code ordinances limiting to four the number of unrelated persons who may inhabit a single family dwelling unit (the so-called "anti-commune law"). In the future, groups of students larger than four will not be able to rent large houses even if they are available.

5. The up-grading of facilities in Palo Alto's downtown core, just now getting underway, could potentially decrease the availability of moderately priced units which students could rent.

6. The citizens of Palo Alto are currently in the midst of a political dialogue which will over time determine the amount and the extent to which there will be new middle and lower income housing. The defeat of a recent rent control referendum can be interpreted to suggest that the high demand for Palo Alto property (and the parallel rising prices) will have much to say about the future character of the city and may cast a considerable shadow over the probability of the construction of housing which students would likely be able to afford.

<u>How important is the cost in a decision to live on- or off-campus</u>? <u>In the future</u>?

The Study Group knows of no evidence which suggests that off-campus living for the average student is now or will be less expensive than the comparable cost of current or predicted Stanford room and board rates. To the contrary, the University's Office of Financial Aids continues to advise students to seek on-campus housing as the less expensive alternative. Future on-campus cost projections are made elsewhere in this study; there is no reason to believe that off-campus costs will not be pushed up by the same forces

and with the same pressure as those on-campus -- labor, food, and energy cost increases. It is true that on-campus room and board rates would be increased by incremental housing construction. This influence may very easily be compensated for by a high demand market for housing in Palo Alto which pushes rents upward at a significantly higher rate than landlord expenses.

On-campus/off-campus example comparison

For the nine-month academic year (including the inter-quarter academic recesses when students technically could be required to vacate their apartments), the 1973-74 on-campus rent for a one-bedroom apartment housing two single students is $1,596 including utilities. This is approximately $176 per month. According to the APARTMENT SURVEY, only 15.6% of all one-bedroom apartments in the Palo Alto area fall into this or lower rental categories. At the time of the APARTMENT SURVEY only two such apartments (out of 107) were vacant.

A less comparable figure but one which is certainly important is to examine what three people spending $88 per month each (approximately the per person cost in Mirrielees House) might secure in the Palo Alto area. Table II-C considers the percentage of rentals in this price category by type of unit (2 bedroom-1 bath, 2 bedroom-2 bath, and 3 or more bedrooms) and compares that with the number of vacancies found in that category in the SURVEY. The most striking thing about Table II-C is that only one vacancy

Table II-C: APARTMENTS IN PALO ALTO AREA COSTING $264 PER MONTH OR LESS*

Type of Unit	Number/Percentage of Units In Category Costing $264 Per Month or Less	Number of Vacancies In Palo Alto Area at Time of Apartment Survey
2 Bedroom - 1 Bath	16 (12.7%)	1
2 Bedroom - 2 Bath	84 (21.2%)	0
3 Bedrooms or More	10 (19.6%)	0

*Excludes utilities

existed in the $264/month or less category of those units surveyed. Methodologically, the SURVEY is skewed toward larger complexes and thus smaller complexes are ignored in the above data. It may be that there are additional vacancies in the small "mom and pop" units. In addition, it must be recognized that we are here concerned about apartment units, and housing rentals which some students occupy off-campus are ignored. Data for such units is not available.

Appendix III

REPORTS OF OVERBUILDING AT OTHER INSTITUTIONS

The University of Wisconsin at Madison has given up 870 dorm spaces in the past two years, turning one dorm into offices and laboratories. Ohio State University faced with 1,400 campus-residence vacancies this fall, may install academic and administrative facilities in a 24-story dorm designed for 1,380 occupants. Kent State University in Ohio closed its third dorm since June. The University of Arkansas . . . this fall has 3,213 students in housing designed for 4,522 students. In 1968, the university housed 32.4 per cent of its students; this fall it houses only 21.5 per cent. The University of Iowa has 700 empty dorm beds. (David W. Hacker, "College Pocketbook Hit by a Living Situation," NATIONAL OBSERVER, October 28, 1972).

Because the Study Group is mindful of the widespread reports of over-building of student residences at some schools, we have investigated those institutions which have overbuilt and have looked at those institutions with which Stanford has traditionally compared itself in terms of undergraduate education.

Several things become clear. First of all, the institutions which appear to have overbuilt are large public institutions, have strong parietal regulations, use high-rise dormitories, do not have a wide variety of living styles from which to choose, and are not primarily residential universities.

We find that private institutions similar to Stanford have continued to expand residence capacities and have not experienced any difficulty filling all residential units. Harvard, which already houses over 90% of its student body, is constructing a new residence at this very moment; Yale, which houses over 86% of its student body, has money in hand to construct two new colleges and is being thwarted by New Haven authorities. We find also that Princeton currently houses over 95% of its undergraduate student body. Stanford now houses approximately 77% of its undergraduates.

Appendix IV
DESCRIPTION OF THE DRAW PROCESS

Introduction

Most undergraduates demonstrate their interest in on-campus housing in a process each Spring Quarter called the Housing Draw. Consequently, an understanding of the Draw, how it works, who enters, who drops out, who is assigned and not assigned ought to put us most of the way down the road toward an estimate of the need for incremental housing. But because the Draw is so complicated, because statistical information must be gathered delicately and used with discretion, making conclusions about what the Draw does or does not tell us will have to be made at a deliberate pace. The best estimate of the number of incremental spaces which should be provided will be based on the waitlists at the beginning of Autumn Quarter of 1973 and the number of overcrowded spaces. The largest of those lists is the Post-Draw Waitlist; last year 518 of the 700 students who were unassigned to housing in the Draw signed this waitlist. The following six or seven pages along with several charts and a flowchart describe how the largest variable expressing housing demand operates. The detailed background should (1) show the reader that the Study Group "best estimate" is conservative, (2) settle some confusing and perhaps contradictory impressions about the Draw, and (3) provide a feeling for the amount of housing demand which there actually may be opposed to what can be demonstrated under current constraints.

What is the Draw Process?

The Spring Draw is a sophisticated two-round lottery held in May of each year to distribute fairly Stanford's available single, upperclass (i.e., non-freshman) undergraduate housing for Autumn Quarter occupancy.

Although the Draw's administrative rules do become complicated there are just two basic concepts upon which the Draw is based:

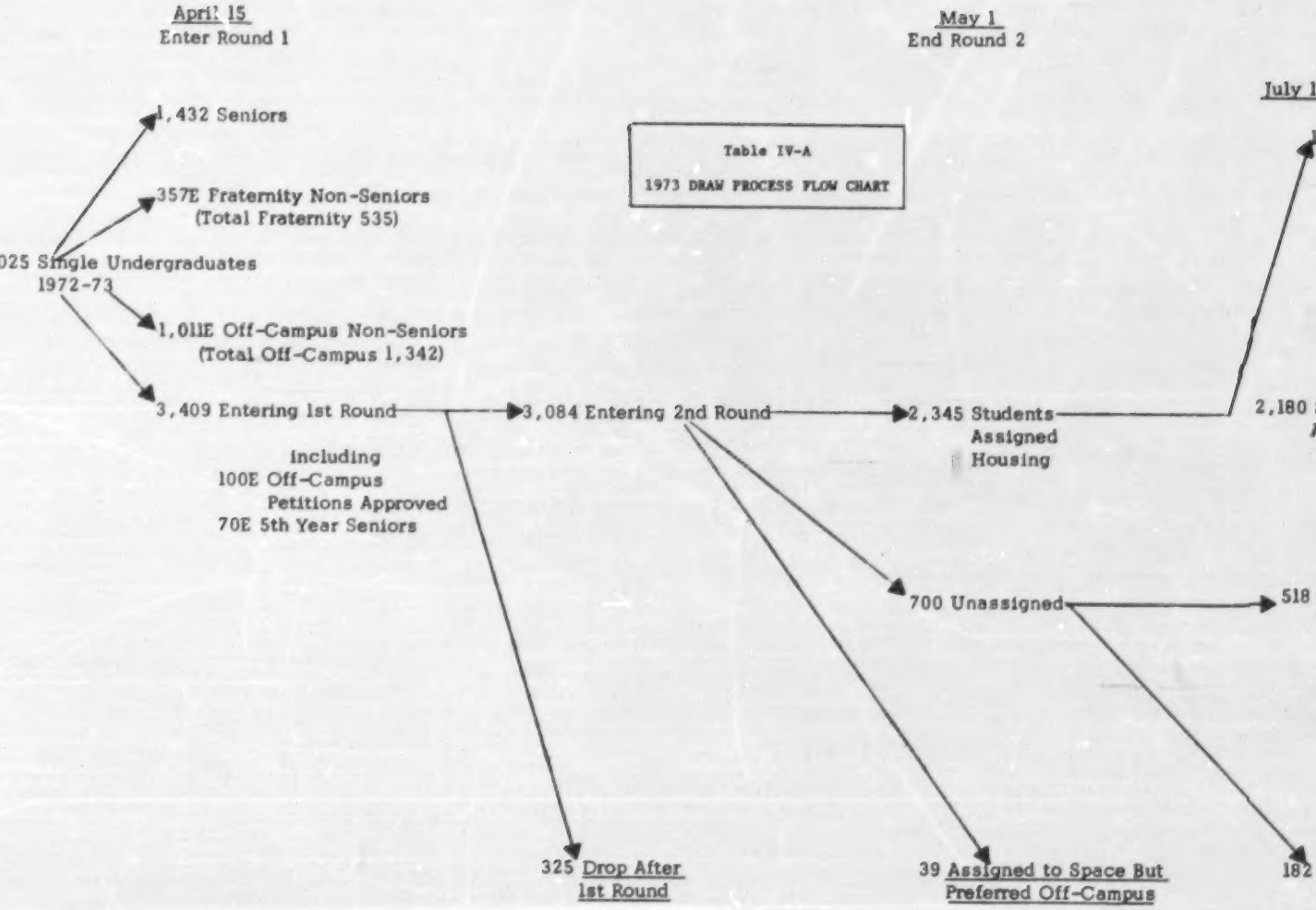
1. Limited Access - Not all students are given the same priority to enter the Draw. Both the Study of Education at Stanford and the Pearson Committee recommended that in the distribution of scarce housing resources, those students who had entered or had tried to enter University housing be given priority over students who had voluntarily left the housing system. Hence, only students currently residing in University housing and those who were unassigned at the end of Round Two of the previous Draw may enter the Spring Housing Draw.

2. Equal Probability of Being Housed - Within the group of students who are eligible for the Draw, no sub-groups or individuals are favored for assignment on campus. Each person receives a Draw number in a random fashion. Students are assigned to housing in order of their draw numbers. The last student assigned housing is said to have the cutoff number. Thus a student with numbers "below" the cutoff were offered the opportunity for housing on campus; while those with numbers "above" the cutoff were not.

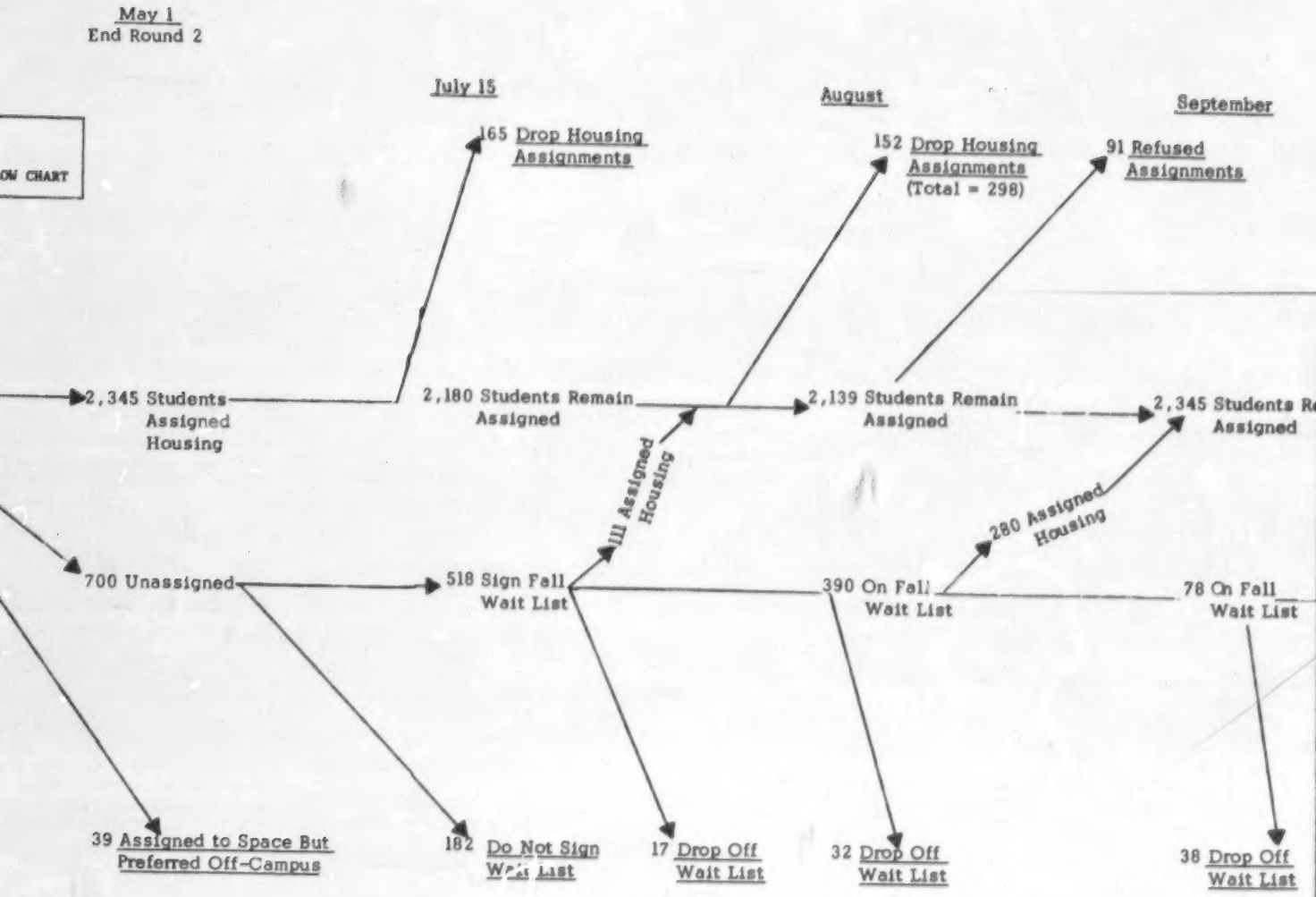
The Draw itself is just the beginning of a continuing demonstration of interest in Autumn housing which spans a full five-month period preceding the beginning of Autumn Quarter. In addition to the Draw data, one must gather and interpret data from the "tail" of the Draw, the Post-Draw Waitlist. After the 1973 Housing Draw, over 500 persons who were unassigned to University housing for Autumn Quarter signed the list (1) to wait for students who had been assigned housing in the Draw to change their minds, drop their assignments, and thus create vacancies, or (2) for other housing that the University might provide. Table IV-A (following) is a flowchart of activity of the students entering the Draw in 1973.

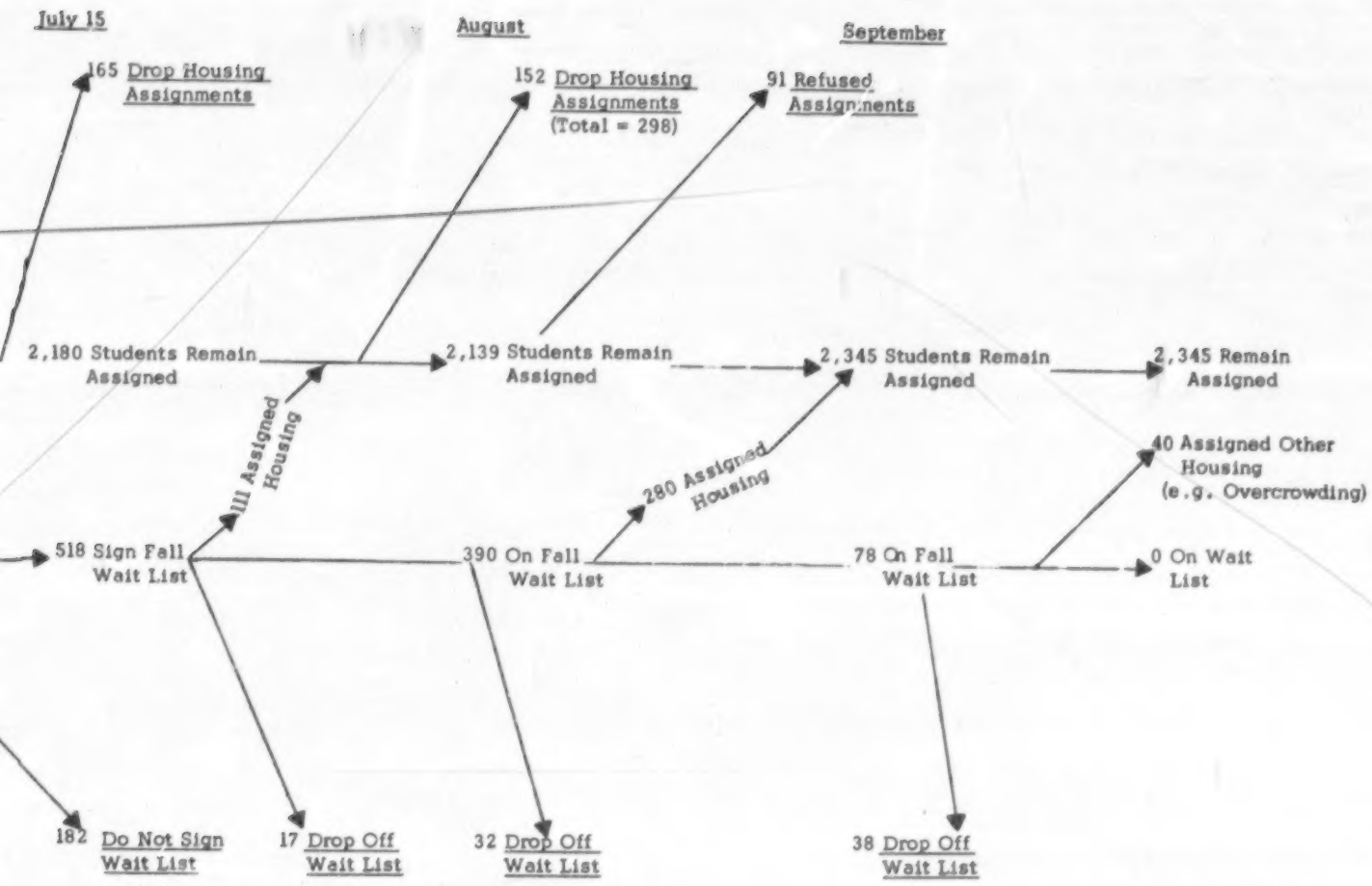
Table IV-A

1973 DRAW PROCESS FLOW CHART



[1] E = Estimate


May 1
End Round 2
July 15
August
September
165 Drop Housing Assignments
152 Drop Housing Assignments (Total = 298)
91 Refused Assignments
2,345 Students Assigned Housing
2,180 Students Remain Assigned
2,139 Students Remain Assigned
2,345 Students Re Assigned
111 Assigned Housing
280 Assigned Housing
700 Unassigned
518 Sign Fall Wait List
390 On Fall Wait List
78 On Fall Wait List
39 Assigned to Space But Preferred Off-Campus
182 Do Not Sign Wait List
17 Drop Off Wait List
32 Drop Off Wait List
38 Drop Off Wait List


July 15
August
September
165 Drop Housing Assignments
152 Drop Housing Assignments (Total = 298)
91 Refused Assignments
2,180 Students Remain Assigned
2,139 Students Remain Assigned
2,345 Students Remain Assigned
2,345 Remain Assigned
111 Assigned Housing
280 Assigned Housing
40 Assigned Other Housing (e.g. Overcrowding)
518 Sign Fall Wait List
390 On Fall Wait List
78 On Fall Wait List
0 On Wait List
182 Do Not Sign Wait List
17 Drop Off Wait List
32 Drop Off Wait List
38 Drop Off Wait List

Issues of Data Interpretation

We can see in Table IV-A that of the 3,409 students who entered the 1973 Draw for housing in Autumn Quarter, 1,064 did not receive assignments. Does this mean that the University should construct 1,064 units? We can also see in the flowchart that the number of persons who dropped their Spring assignments by Autumn Quarter was so large that a waitlist of approximately 500 students was required just to refill the spaces. Does this mean that large excess demand is necessary in the Draw and that the University should build no spaces? During the year one may read in The Stanford Daily or in internal University correspondence bits and pieces about housing demand; because some of the descriptive data varies so widely, as it does above, the information appears to some as contradictory and confusing. It is the purpose of this section to reduce some of this consternation by following the Draw process, the largest indicator of demand, for a five-month period, pointing out both the data available and the issues of interpreting that the data in an evaluation of the demand for new housing.

In short, the reason that there can be widely varying opinions of how many incremental spaces should be built is that the data which supposedly supports the positions is usually inappropriate for such use. Nearly all the data currently drawn from the housing system is not generated to answer the question, "How many incremental spaces should be built?" For example, the number of students entering the Draw in the Spring provides a count of the number of students who in the Spring are interested to some degree in some kind of Stanford housing in the Autumn. To make the Draw information more useful requires some effort.

Fortunately, the excess of 1,064 students can easily be viewed as constituting several groups--the merits of each, separably discussable. The 1,064 who are unaccommodated in the Draw drop from the process not at one time, but in several groups over a five month period from May to October (see Table IV-A) some drop before the Second Round of the Draw, some do not sign the Post-Draw Waitlist, and so forth. The remainder of this section consists of a discussion of issues concerning the largest and most important of those groups. The four issues to be discussed are set out in Table IV-B below and are taken up in sequence in the text following the Table.

Table IV-B: 1973 DRAW-PROCESS & DATA INTERPRETATION ISSUES

DATA INTERPRETATION ISSUES (These issues are discussed in the text following this Table)	1973 DRAW PROCESS
	3,409 Enter Draw for Autumn '73 Housing
1. THE NUMBER OF STUDENTS UNASSIGNED IN THE DRAW	2,345 Students Assigned 1,064 Unassigned
2. THE DISTINCTION BETWEEN THE FIRST AND SECOND ROUND	325 Drop out after First Round 739 Students Unassigned after the Second Round
3. WHO SIGNS THE POST-DRAW WAITLIST?	221 Drop Out after Round Two 518 Sign Waitlist
	DISPOSITION OF 1973 WAITLIST
	298 of the 518 on the Waitlist were offered & accepted Draw refill assignments.[1]
4. HOW IS THE WAITLIST USED?	91 of the 518 were offered & refused assignments.
	87 of the 518 dropped from the list
	42 of the 518 were assigned to other openings.
	(298 + 91 + 87 + 42 = 518)

[1] 298 of the 2,345 Spring Draw Assignments Dropped During the Summer.

1) The number of students unassigned in the Draw - There are three numbers available which describe the number of students who did not receive housing in the Draw; but each number is the answer to a slightly different question.

The most common description--perhaps because it is the most easily understood—is simply the excess of students over spaces. In 1973 there were 3,409 students who entered the Draw, but spaces for only 2,345, leaving 1,064 who had to go without housing (see Table IV-C, Row #6).

However, as soon as one alters the focus from a measurement of interest to a measurement of the degree of interest, the numbers begin to shrink. Of the 1,064 above 325 withdrew after the First Round of the Draw for reasons (discussed in some detail in the next section) which can be summarized as casting some shadow over the level of interest in on-campus housing shown by some members of this group. Thus, instead of 1,064, there were 739 persons who went through Round Two and were still unaccommodated (See Table IV-C, Row #5).

Establishing demand for the purpose of building new housing becomes an estimate of the number of people who would actually want to live in that new housing; consequently, it might be valuable to know the number of students who would have taken any space in the housing system. Deducting the persons who were unaccommodated at the end of Round Two but who would have preferred off-campus to at least some on-campus housing, reduces the 739 to 487 (see Table IV-C, Row #5B).

2) The distinction between the First and Second Rounds of the Draw. Persons using Draw data often disagree about whether it is more appropriate to use Round One data or Round Two data (see Table IV-C). The distinction gains some practical importance when estimating the demand for new housing because the number of persons who drop after the First Round is so large--

Table IV-C: DRAW PARTICIPATION & ASSIGNMENTS 1969-1973

	1969	1970	1971	1972	1973	1974
1. ENTERED ROUND ONE						
Men	1092	1246	1532	1654	1996	1538
Women	862	1005	1143	1161	1413	2138
TOTAL	1954	2251	2675	2815	3409	3676
2. WITHDREW FROM THE DRAW AFTER ROUND ONE			[158]	[212]	[325]	[313]
3. ENTERED ROUND TWO						
Men			1405	1493	1733	1911
Women			1112	1110	1351	1452
TOTAL			2517	2603	3084	3363
4. SPACES ASSIGNED IN THE DRAW			[2095]	[2055]	[2345]	[2448]
5. UNACCOMMODATED IN ROUND TWO			422	548	739	915
A. PREFERED OFF-CAMPUS TO SOME KIND ON-CAMPUS HOUSING			[181]	[165]	[252]	[267]
B. WOULD HAVE TAKEN ANY SPACE			241	383	487	648
6. EXCESS OF DRAW PARTICIPANTS OVER SPACES (#1-#4)			580	886	1064	1228

nearly 1/3 of the 1,064 excess students over spaces in the 1973 Draw. Excess demand in 1973 with Round One as a source would be 1,064, but only 739 if Round Two data were used.

3) Students Who Dropped from the 1973 Draw Solely Because of High Draw Numbers. In the 1973 Draw, there were 325 students who participated in Round One but who chose not to participate in Round Two. The task in this section is to estimate the housing demand shown by students who dropped between Rounds of the 1973 Draw because they had high Draw numbers, and therefore, had the legitimate expectation that if they entered Round Two they would be unassigned. The Study Group has determined that this demand is 57 spaces.

In estimating the demand, only students whose housing choices were nonrestrictive were considered.[1] We would expect a certain attrition rate between rounds not affected by high Draw numbers. Thus, the demonstrated demand is not a count of all nonrestrictive students. The calculation was done on a sample of 249 of the 325 students dropping out (See Table IV-D). The results on this sample were then extrapolated to the entire pool of 325. Of the 249 we will consider the 187 who were nonrestrictive. If the choice to drop out of the Draw were independent of Draw number, we would expect that the 187 would have Draw numbers randomly distributed across the range of Draw numbers. Instead we notice that 44% of all nonrestrictive students dropping out had numbers above the Round Two cutoff, whereas only 28% (850/3,084) of all students entering Round Two had numbers above the Round Two cutoff. The difference of 16% or 30 of the 187 nonrestrictive may be explained by the effect of high draw numbers.

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[1] A student is said to be nonrestrictive in his choices either if he lists "any house appropriate to my sex" as a choice or if he had eight specific residence choices.

Extrapolating this result to the full pool of 325 yields an estimate of 39[2] who dropped out as a result of high Draw numbers.

Table IV-D: SAMPLE OF STUDENTS DROPPING OUT BETWEEN ROUNDS OF THE 1973 DRAW

	Below The Round II Cutoff	Above The Round II Cutoff	Total
Restrictive Students Dropping Out	32 (52%)	30 (48%)	62 (100%)
Nonrestrictive Students Dropping Out	104 (56%)	83 (44%)	187 (100%)
Total Students Dropping Out	136 (55%)	113 (45%)	249 (100%)

4) Who Signs The Post-Draw Waitlist? - Every student who entered the Draw and was not assigned had the opportunity to sign the waiting list. In this study, the demand presented by those who signed the waiting list is an important factor. Thus, it is of interest to understand why some of those who had the opportunity to sign the waitlist failed to do so.

The argument developed in this section is parallel in form to the discussion of which students dropped out of the Draw after Round I. However, the incremental demand indicated by consideration of the unassigned students who failed to sign the waitlist is not substantial enough to include in the overall demand estimated.

On the 739 students who were unassigned at the end of Round II of the 1973 Draw, 518 signed the waiting list while 221 did not. If the students who did not sign the waiting list had significantly higher numbers than those who did, then we might conclude that they were discouraged by their high numbers and in fact represent demand.

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[2] $325 \times \frac{187}{249} = 244$ projected nonrestrictive students in full pool.

$244 \times .16 = 39$ projected nonrestrictives deterred by high Draw numbers

Examination of the data on 700 of the 739 students unassigned, shows that the average Draw number of women who did not sign the waitlist is not significantly different from the average of those who did. However, the average draw number of the men signing the waitlist is substantially lower than the average of those who did not. The difference in mean draw numbers is 168 (4039-3876) which represents roughly 18 individuals who we might conclude were discouraged from signing the waiting list simply by unfortunate draw numbers.

Table IV-E: DRAW NUMBER DISTRIBUTION OF UNASSIGNED STUDENTS AT THE END OF ROUND II, 1973 DRAW

	Men	Women	Total
Unassigned students who signed University waiting lists	262	217	479
Unassigned students who did not sign University waiting lists	124	97	221
Total unassigned students	386	314	
DRAW NUMBERS			
Average Draw numbers of those who did not sign waiting lists	4039	4148	
Average (mean) Draw numbers of those who signed waiting lists	3876	4157	

5) What Happens to the Waitlist? - Key to an appreciation of the difference between Spring and Autumn demand data is an understanding of the Draw assignment drop rate and the Post-Draw Waitlist which is used to replace the dropped assignments.

Of the 2,345 Draw assignments made in 1973, 317 or 14% were dropped over the summer. This group is characterized as follows:

152 (48%) Registered in the Autumn and apparently found more preferable accommodations off-campus.

114 (36%) Did not register or went overseas.

51 (16%) Were given up by persons who had in the interim been selected to be student staff in the residences and for whom spaces had been held out from the Draw.

317 (100%)

While the assignment drop rate is not particularly large, the number of students who must remain unassigned in the Spring so that they can be later assigned to the dropped spaces becomes very large because of the large number of students who drop out of the process. By October over half of the 700 people who went unassigned in the Draw did not want to be assigned to an opened space for one reason or another. Under the current system of assignment it seems that a large number of persons must appear as excess demand in the Spring to assure that the 2,345 spaces assigned in the Draw are still filled by Autumn Quarter.

Appendix V
DEMAND CALCULATIONS

Estimate Based on 1973 Post-Draw Waitlist Information

At the end of the 1973 Draw, there were 700 students who were unaccommodated in the Draw. Over 500 chose to sign a waitlist for Autumn Quarter housing. A flowchart of the entire Draw process, including the activity of this Post-Draw waitlist during the Summer of 1973, is included in Appendix IV. Use of the flowchart alone, however, is misleading in the effort to determine incremental demand. The flowchart presents an interesting phenomenon. Because 14% (317) of the students assigned housing in the 1973 Draw drop the assignment before school starts, because 19% (91) of the students on the waitlist refuse reassignments to the vacated spots, and because 17% (87) of the students originally signing the waitlist drop from the waitlist, it appears that a post-draw waitlist of over 500 at the end of the Spring Draw is required to insure that the system is filled by Autumn Quarter Registration Day. In fact, we can see that, of over 500, there are only 40 students remaining at the beginning of Autumn Quarter who still asked for housing.

As it stands, the above description can be misleading. Not included are the number of students who, as Autumn Quarter approached, turned down assignments because they had by prudence been forced to find other housing fearing the prospect of no housing by Resistration day. Also not considered are those students who dropped from the waitlist for the same reason. Data is available to make estimates of the size of these two factors.

Based on the interpretation of this data, which follows, it appears that there were 64 persons in 1973 who refused assignment because of the late hour, and 20 who dropped from the list for the same reason, making a

total incremental demand estimate of 84 based on a review of the Post-Draw waitlists. (This does not include the 40 remaining who were assigned to overcrowded spaces and are accounted for in that category. The Elimination of 1973-74 Overcrowding is discussed below.)

Interpretation of "Refused Assignment Category" - Some interpretation is required for the category, "Refused Assignment." Counted here are those people who have refused assignments made possible by dropped Draw Assignments. The fact that they have turned down housing does not necessarily mean that we should not count them when calculating demand. It appears that most of the group are turning down housing because of the late hour in which it is offered.

Table V-A: ASSIGNMENT DROP & POST-DRAW WAITLIST ACTIVITY FOR AUTUMN QUARTER 1973

	Feb	Mar	Apr	May	Jun	Jly	Aug	Sep	Total
Drop Draw Assignment					57	118	55	87	317
Sign-Up				369	98	7	3	41	518
Accepted Assignments							104	236	340
Refused Assignment (Increment Demand Estimate = 64)							7	84	91
Drop From List (Increment Demand Estimate = 20)						17	32	38	87

Assignments from the waitlists are done in batches beginning on August 1. Students then have ten days to refuse the assignment. Note the dramatic increase in the rate of refusals as Autumn Quarter nears. In August only seven of 111 assignments (6%) were refused. In September, however, when 320 assignments were made the refusal rate increased sharply; 84 of 320

assignments were refused (26%). It appears reasonable to conclude that a prudency factor is at work--students will be making alternate housing plans rather than taking the risk of remaining on a waitlist and being homeless as school begins.

The remaining task is equitably to translate that conclusion and those data into the number of spaces which could safely be built based on the data. Using the August refusal rate, we would have expected that 20 of the 320 assigned in September would have refused. Instead, 84 refused, and the difference of 64, caused in the Study Group's judgment by the above phenomenon will be added to a list of similar measurements, the sum of which will be the Study Group's best estimate of the number of space the University could build to meet measurable demand.

Interpretation of "Drop from List Category" - Some interpretation is also necessary for the category "Drop From List." The category, shown in Table V-A includes both persons who have asked to be taken off the list and who have been taken off the list by the Housing Office when they survey interest from time to time to make certain that the list really represents those who are currently interested in on-campus housing. Seventeen students dropped from the list in July, 32 in August, and 38 in September. Should we conclude that since the number of drops in the latter two months is similar that there is no evidence of a "prudency" factor--that students are not dropping faster as school approaches to make other, more certain plans? No. If, instead, we look at the percentage of persons who drop from the waitlist, there is a dramatic difference between August and September because the number of people who are on the list decreases by a large amount in the two-month period. The drop rate of 32 in August represents 7% of the 460 people who are on the list at that time. However, near the end of

September there are only 55 people remaining on the list, 38 of whom drop from the list--an increase to 69%. If the August drop rate were projected into September, we could have expected only five people to drop, while 38 actually did so. It would be unfair to use the difference of 33 as an estimate of the demand actually shown, however, because the 69% represents only the end of September on a curve increasing through August and September. A mid-September mark would approximate 20 which represents the Study Group's best estimate of the number of new spaces which could be built using our data standards.

Thus, the 20 students who dropped off the list because of the prudency factor, when added to the 64 students who refused assignment because of that factor yields a total demand of 84 based on the Post-Draw waitlist information.

Net Demand Increase in the 1974 Draw

In this estimate the Study Group assumes the 265 additional participants (over the 1973 Draw) as having the same characteristics of the remainder of the population and that they can be added to the unassigned group. The 265 must then be reduced by (A) those who would have dropped after the first Round and (B) those who would have dropped after the second Round and (C) those who have dropped over the summer.

	A		B		C
$x = 256 -$	$\frac{325 - 69}{3409} \times 265$	$-$	$\frac{182}{700} \times (265 - A)$	$-$	$\frac{91}{518} \times (265 - A - B)$
$x = 265 -$	$.08 \times 265$	$-$	$.26 \times (265 - A)$	$-$	$.18 \times (265 - A - B)$
$x = 265 -$	21	$-$	63	$-$	33

$x = 148$

The Off-Campus Component

Although Stanford currently has over 1,300 undergraduates living off-campus, it is a group about which very little is known--at least as far as housing preferences and patterns are concerned. As on-campus housing has become more popular and there is an excess of demand over supply, priority for housing was given to persons who were already living on-campus or who had tried to live on-campus. Undergraduates who voluntarily choose to move off-campus or chose not to enter the Draw the year before may not enter that Spring Draw. Off-campus students in this category may enter University housing, but they must sign a waiting list to do so and are assigned after all of the 700 unassigned persons at the end of Round Two.

The practical result is that off-campus students deciding in the Spring that they would like to have on-campus housing will usually have to wait until Winter Quarter before they are assigned. During their waitlist period, if they are assigned and refuse to move in, there is a $10 charge. Intuitively, one can say that there must be few students for whom on-campus residence is so important that they would begin the academic year in an unstable housing situation, knowing that they could be assigned at any time and that the uncertainty may well last a quarter. But there is no information either to confirm or refute the contention. We do know that between February and October 1973, 250 off-campus students indicated some interest in on-campus housing either by petitioning to enter the Draw or by signing the off-campus waitlist. The demand shown by the 100 successful off-campus petitioners is reflected in the Draw Process estimates in the immediately preceeding section. Of those who signed the off-campus waitlist, 57 were not assigned housing because it was unavailable (see "Drop from" List Category in Table V-B). This group of 57

meets the standards for the determination of demand set in the Introduction and, therefore, should be added to the demand calculated in the other categories.

Table V-B: OFF-CAMPUS WAITLIST ACTIVITY FOR AUTUMN QUARTER 1973

	Feb	Mar	Apr	May	Jun	Jly	Aug	Sep	Total
Sign-Up	2		8	14	18	6	16	84	147
Accepted Assignments								73	73
Refused Assignment								8	8
Drop from List							12	57	69

The Transfer Student Component

Description of Current Tansfer Student Housing - As one can see in Table V-C almost the same percentage of incoming transfer and upperclass students apply for on-campus housing (65% vs. 70%). But the University currently houses a much larger percentage of returning upperclassmen on-campus than new transfer students (70% v. 48%). This information presents two basic housing policy alternatives: Grant incoming transfer students the opportunity to live on campus--or merely equalize the probability of on-campus housing among transfer and upperclassmen--which would necessitate construction of only 16 spaces.

It has been argued that transfer students, just as freshmen, should be given a high priority for on-campus housing in their first year to enable them to become familiar with the Stanford community, as well as a social unit in a short period of time. The Study Group agrees and feels that housing should be available for incoming transfer students who desire it.

Table V-C: TRANSFER STUDENT HOUSING DATA

	Admitted to University	Applied for on Campus Housing	Actually Housed on Campus	% of Admittees Housed	% of Applicants Housed
1971-72					
Autumn	416	317	148	36%	47%
Winter	41	40	23	56%	58%
Spring	26	19 Est.	11	42%	58%
1972-73					
Autumn	278	267	206	54%	77%
Winter	53	34	32	60%	94%
Spring	25	18	17	68%	94%
1973-74					
Autumn	355	270	187	53%	69%
Winter	42	26	20	48%	77%
Total	1336	991	644	48%	65%
	Note: compare with the same data for single upperclassmen.			70%	70%

Calculation of Waitlist Demand - The demand figures above were calculated using a three-year data span. Because our model uses only the demand for 1973 housing, a slightly different computation must be made to be consistent with the other sections. If the September "Drop From List" category is added to the September "Refused Assignment" category, less the number we could have expected to refuse in September (9% or 8%), there would have been 48 + 22 - 8 or 62 spaces which could have been used by entering transfer students in the Fall of 1973.

Table V-D: TRANSFER WAITLIST ACTIVITY FOR AUTUMN QUARTER 1973

	Jun	Jly	Aug	Sep	Total
Sign-Up	92	102	63	13	270
Accepted Assignments			117	70	187
Refused Assignments			11	22	33
Drop From List		1	2	48	51

The Elimination of Current Overcrowding of Residences

In an effort to satiate the increasing demand for on-campus housing in recent years the University has turned to overcrowding some of its residences--a route which should be discontinued as soon as possible.

Individual judgment will differ to some degree about the appropriate occupancy for a given residence--particularly in the Row Houses--as rooms offer different square footage, privacy, and amenities (such as wash basins). Overcrowding is not a liberal interpretation of this range. Overcrowding is worse--assigning students to housing based on lower standards than are applied to the rest of the campus. For example, 39 three-room suites in Roble which were originally designed for two persons now hold not three persons but four--as well as four beds, four desks and chairs in addition four sets of personal belongings (stereos, sets of books, etc.). In Lagunita, 96 single rooms have been made into doubles with bunkbeds and the 192 students given a reduced room rate. In Branner, 3 two-room suites now hold four students each and reduced room rates have been given. Thus, although 120 additional students were housed, 306 students were directly overcrowded in their rooms. Overcrowding not only means a more crowded room for the students assigned to that room, but it also means a decrease in the quality of the dormitory for all students. Lounges, dining rooms, bathrooms, recreational space must all serve more than they were designed to serve.

The decision to overcrowd was made on the logic that it was preferable to forcing that many students off-campus. However, many students, parents, and some of the residence staff do not feel that it was a wise thing for the University to do. The matter is constantly under review and the amount of overcrowding may change.

For the purpose of calculating for incremental housing spaces

current overcrowding certainly meets the qualifications set out earlier, and all 120 should be counted.

Table V-E: RESIDENCE OVERCROWDING 1971-4

	Rated Occupancy	Overcrowding 1971-2	Overcrowding 1972-3	Overcrowding 1973-4	Current Total
Lagunita	301			87	388
Roble	259			30	289
Branner	175			3	178
				120	